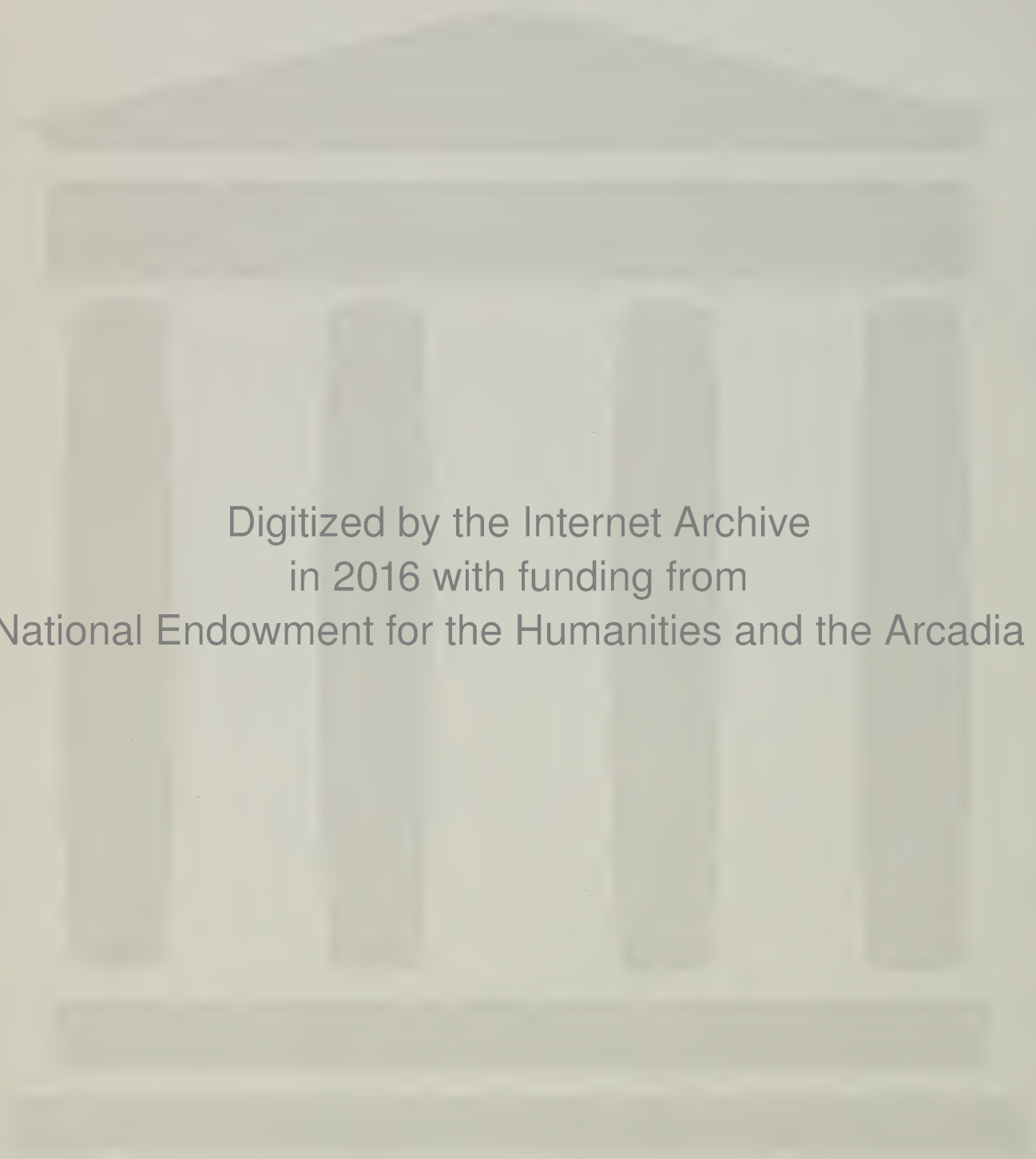


HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE



Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

RHODE ISLAND MEDICAL JOURNAL

Volume 54, 1971

**Published for the Rhode Island Medical Society
Under Direction of Committee on Publications
106 Francis Street, Providence, Rhode Island**

SUBJECT INDEX

| | Page | | Page |
|--|--------|---|--|
| ABORTION, Therapeutic | 462 | DERMAQUIZ | 48, 168, 193, 253, 344 426, 514, 555, 591 |
| ADMINISTRATION View | 357 | DIABETES Symposium | 101 |
| ALCOHOL, Health Hazard | 584 | DIVERTICULOSIS, Jejunal | 413 |
| ALCOHOLISM — Review and Overview | 79 | DOCTORS and Patients | 355 |
| ALKALINE Phosphatase, Abnormal | 539 | EDALOGY | 48 |
| AMERICAN Antiquarian Society Collections | 213 | ENTERITIS, Regional | 147 |
| AMERICAN Board of Family Practice Exam | 430 | EDITORIALS | |
| AMERICAN Health Care System | 199 | Automatic Elevator Buttons and Hospitals | 375 |
| AMERICAN Medical Association | | Automation in the Microbiology of Antibiotic Therapy | 513 |
| House of Delegates | 5, 393 | Baby's Diaper and My Plate of Soup | 425 |
| APLASTIC Anemia and Infectious Hepatitis | 451 | Claude Emerson Welch, M.D. | 217 |
| AUSTRALIA Antigen, Viral Hepatitis | 89 | Discrimination in Hospitals | 424 |
| AUTOMATION and Laboratory | 497 | Drug Stores and Tobacco | 425 |
| BACCALAUREATE Education | 29 | The Future of Organized Medicine | 552 |
| BASSINI, Edoardo | 91 | A Glimmer of Hope | 514 |
| Erratum | 130 | Good Health is More Than Medical Care | 469 |
| BOERHAAVE, Herman | 157 | Health Care for the Poor | 159 |
| BONE vs. Liver | 539 | Herpes Viruses and Cancer | 327 |
| BOOK Reviews | | Indications of the Quality of American Medicine | 218 |
| AMA Drug Evaluations 1971 | 376 | Induction of Labor with Prostaglandin | 590 |
| Biopathology of Pattern Alopecia (Bac- caredda-Boy, et al.) | 195 | Infant Mortality Comparisons | 160 |
| Circe (Gelli) | 195 | Information Overload | 101 |
| Endocrinology and Human Behaviour (Michael) | 134 | Inner City Health | 470 |
| Essentials of Clinical Endocrinology (Sch- neeberg) | 133 | Interferon and the Treatment of Cancer | 272 |
| Exercises in Diagnostic Radiology — The Chest (Squire, et al.) | 421 | Joe Sullivan | 471 |
| Gold Fever (Groh) | 475 | Levodopa and Parkinsonism | 46 |
| Handbook of Legal Medicine (Moritz & Morris) | 575 | Medical School Contributions and AMA-ERF.. | 271 |
| Last Things (C. P. Snow) | 472 | Medical Studies Commence in Haifa | 99 |
| Manual of Clinical Laboratory Procedures (Faulkner & King) | 195 | Meeting | 45 |
| Proc. Centennial Symposium, Otolaryngology (Manhattan EET Hospital) | 69 | Methylprednisolone for Near Drowning | 271 |
| Surgery and Biology of Wound Repair (Peacock & Van Winkle, Jr.) | 575 | Misquote Manufactures Misinformation | 215 |
| BRETT, James | 157 | More on the Metric System | 161 |
| BROWN Medical School, Impact on State | 307 | New Career for Scientists | 219 |
| BROWN University, Hypertension Conference Program | 168 | New Framingham Study | 99 |
| BROWNE'S First Law | 233 | Nutrition, Ecology, and the Voice of Reason .. | 220 |
| BYLAW Revisions, 1971 | 560 | PAS-MAP — A Golden Opportunity | 44 |
| CAIUS, John | 550 | Peer Review | 589 |
| CELL Cultures, Genetic Analysis | 359 | Pharmaceutical Advertising | 552 |
| CHAPIN Oration, 30th | 355 | Population Control | 219 |
| CHEMISTRY Lab Services Curtailed | 273 | Primer: The Kallikrein-Kinin System | 272 |
| CHOLESTEROL, Intestinal Resection in Dogs | 208 | Replication of a Prototype | 470 |
| COLLECTIONS, American Antiquarian Society | 213 | Screening Test for Donor-Carriers | 97 |
| CONTINUING Medical Education Conference | 65 | Shades of 1827 | 590 |
| CYST, Hamartomatous | 420 | Shortage of Nurses | 43 |
| DANFORTH Oration | 367 | Sulfamylon in Burns | 327 |
| DAY Care Centers | 541 | Surgery | 471 |
| DEGIOVANNI, Achille | 91 | There is Hope | 375 |
| Erratum | 130 | Tri-State RMP: Medical School-Hospital Bonanza? | 96 |
| DELIVERY of Health Care | 407 | Vaccination | 590 |
| | | Weights and Measures | 46 |
| | | Well Done! | 162 |
| | | What Ever Happened to Hospital Licensure ? | 513 |
| | | EDITOR's Mailbox | 165, 377 |

AUTHOR INDEX

| | Page | | Page |
|----------------------------------|-----------------------|---------------------------------------|--|
| ADELMAN, Maurice | 37 | LENNON, Joseph L. | 38 |
| ALBALA, Maurice M. | 451 | LEONE, Louis A. | 255 |
| AMA Legislative Department | 182 | Errata | 427 |
| ARONSON, Stanley M. | 495 | LEVY, R. | 458 |
| BARON, Steven H. | 93 | LEWIS, Robert V. | 16, 17, 64, 89, 134, 157, 165, 194, 195, 472, 550 |
| BARRETT, John T. | 167 | LICHTMAN, Herbert C. | 495 |
| BEEZER, J. Kenneth | 581 | LONGOBARDI, Arturo | 149 |
| BELLINO, Joseph P. | 151 | MACDONALD, William J. | 275 |
| BERSON, Solomon A. | 501 | MACNAB, Ian | 367 |
| BORNEMEIER, Walter C. | 310 | MARTIN, H. F. | 539 |
| BROWNE, Howard S. | 65, 233 | MAY, J. Brian | 84, 163 |
| BUXTON, Bertram H., Jr. | 77 | MCCORISON, Marcus A. | 213 |
| CADENA, Eusebio | 144 | MCGOLDRICK, Catherine | 27 |
| CALDER, Harold G. | 219 | MELVILLE, Robert S. | 497 |
| CARRIERE, S. | 458 | MIGLIACCIO, A. J. | 455 |
| CHATOWSKY, Anthony P. | 462 | MIGLIACCIO, A. V. | 455 |
| CUNNINGHAM, Mrs. John J. | 304 | NAJERA, Gabriel A. | 166 |
| DASHEF, Oscar Z. | 166 | OSLER, William | 33 |
| DAVIES, Stanley D. | 581 | PAI, Vital T. | 151 |
| DELORENZO, Robert John | 359 | PAN, Charles A. | 451 |
| EVARD, John R. | 166, 581 | PARROTT, Max H. | 199 |
| FANGER, Herbert | 195 | PERL, Daniel P. | 509 |
| FRATANTUONO, A. Rose | 25 | PORTER, Arnold | 263 |
| GAGNON, E. | 458 | PREBLE, Lorrena | 255 |
| GEORAS, Venetia B. | 84, 163 | Errata | 427 |
| GIBSON, J. Merrill Jr. | 420 | RANDALL, Henry T. | 208 |
| GILMAN, John F. W. | 376 | R. I. State Nurses' Association | 164 |
| GINZBERG, Eli | 409 | RICHARDSON, Elliot | 357 |
| GOLDMAN, Leon | 153 | RONCHESE, Francesco | 48, 91, 168, 193, 195, 337, 426, 475, 591 |
| GOLDOWSKY, Seebert J. | 5, 393, 413, 521, 546 | ROTH, Russell B. | 205 |
| GORFINE, Robert | 147 | SARGENT, Francis B. | 69, 151, 575 |
| GRAZIANO, Catherine | 32 | SAVASTANO, A. A. | 144 |
| GRIFFITHS, W.C. | 539 | SAVITZ, Harry A. | 467 |
| GRIVERS, S. J. | 539 | SENSEMAN, Laurence A. | 584 |
| HACKMAN, Edmund T. | 5, 393 | SEXTON, Richard P. | 307, 575 |
| HAMOLSKY, Milton W. | 134 | SHAMMAS, Elia | 541 |
| HANLEY, Arthur F. | 266 | SHARP, Ezra | 413 |
| HINCHCLIFFE, Malcolm C. | 273 | STEAD, Eugene A. | 355 |
| HOCHBERG, Mark S. | 208 | STRAUSS, Bella | 316 |
| HOFFMAN, Melvin D. | 377 | STUART, John R. | 211 |
| HORWITZ, Manuel | 421 | Erratum | 287 |
| HOYT, Charles N. | 79 | TATE, Barbara L. | 29 |
| INGLES, Thelma | 313 | TIERNAN, Robert O. | 407 |
| JUDKINS, Richard F. | 151 | TIERNEY, John T. | 139 |
| KAAN, Sze K. | 451 | VIRKS, Johannes | 384 |
| KAKVAN, M. | 458 | WATNICK, Murray | 422 |
| KERNESS, Larry | 402 | WEBBER, Banice | 417 |
| KLUTZ, William S. | 211 | YAHHR, Melvin D. | 47 |
| Erratum | 287 | YALOW, Rosalyn S. | 501 |
| LAMARCHE, Paul H. | 84, 163 | YOUNGKEN, Heber W., Jr. | 321 |
| LAUFER, Maurice W. | 167 | | |
| LEKAS, Mary D. | 577 | | |

missing page, 200

SUBJECT INDEX

| | Page | | Page |
|--|-----------------------|---|---|
| EDUCATION, Tarnished Image | 38 | MEDICAL Humanists | 550 |
| EDUCATION, Medical, Continuing | 65 | MEDICAL School at Brown | 307 |
| FARRELL, John E. (Photo) | 277 | MOBILITY in Nursing | 313 |
| FEMUR, Fractures | 144 | MOWRY, Martha | 546 |
| FIDRYCH, Leona F. (Photo) | 37 | MYOCARDIAL Blood Flow, Mammary Artery Im- plantation | 458 |
| FISKE Fund Prize Essay, 1971 | 359 | NARCOTIC Registration | 243 |
| FRACTURES, Femur Shaft | 144 | NARCOTICS, Regulations | 402 |
| FUTURE of Laboratory Medicine | 495 | NATIONAL Health Insurance | 205 |
| GENETIC Analysis, Somatic Cell Cultures | 359 | NATIONAL Health Insurance Programs | 182 |
| GOLDOWSKY, Seebert J. (Photo) | 277 | NECROLOGY, 1970 | 18 |
| GRADY, John P. (Photo) | 277 | NEEDLE Biopsy of Liver | 149 |
| HACKMAN, Edmund T. (Photo) | 277 | NORTH Kingston, Leukemia | 255 |
| HAMARTOMATOUS Cyst of the Liver | 420 | Errata | 427 |
| HEALTH Care | 407 | NURSE and Patient | 33 |
| HEALTH Care, American | 199 | NURSE of the Year Award, 1970 | 37 |
| HEALTH Services, Rhode Island | 139 | NURSING, Baccalaureate Education | 29 |
| HEPATITIS, Viral, Aplastic Anemia | 451 | NURSING, Degree Program | 27 |
| HEPATITIS, Viral, Australia Antigen | 89 | NURSING Education, Association's Role | 32 |
| HEREDITARY Disorders, Prenatal Diagnosis | 509 | NURSING, Mobility | 313 |
| HODGKIN's Disease, Splenectomy | 455 | NURSING, Practical | 25 |
| HOSPITAL Costs | 409 | NURSING, Professional Association | 32 |
| HOSPITALS, Day Care Centers | 541 | NURSING, Professional, Definition | 164 |
| HOSPITALS and Physicians | 417 | ONE Sentence Essay | 104, 232, 305, 326 383, 386, 427, 466, 476 |
| HOYE, Stephen J. (Photo) | 277 | PARAMEDICAL Programs, Rhode Island | 321 |
| HYPNOSIS Workshop, Program | 182 | PATIENT and Nurse | 33 |
| INSULIN, Mechanism of Action | 93 | PATIENTS and Doctors | 355 |
| INSURANCE, Health, Programs | 182 | PAWTUCKET Medical Association | |
| INSURANCE, Health, Proposals | 205 | Officers | 251 |
| INTESTINAL Resection, Cholesterol Absorption (Dogs) | 208 | PEER Review (Ed.) | 589 |
| JEJUNAL Diverticulosis | 413 | PERFORATION in Regional Enteritis | 147 |
| KAMINER, Isaac | 467 | PERIPATETICS | 16, 64, 165, 194, 348, 404, 574 |
| KRAEMER, Richard J. (Photo) | 276 | PHYSICIAN, Pressures | 77 |
| LAB Services Curtailed | 273 | PHYSICIANS and Hospitals | 417 |
| LABORATORY and Automation | 497 | PHYSICIANS Seek Opportunities | 449 |
| LABORATORY Medicine Future | 495 | POSTAGE Stamps in Medicine | 337 |
| LASER Technology, Developments | 153 | POSTVACCINAL Sinusitis | 577 |
| LAWS, Scientific | 17 | PRACTICAL Nursing | 25 |
| LEGISLATION, General Assembly | 437 | PRENATAL Laboratory Diagnosis | 509 |
| LEGISLATIVE Proposals, National Health In- surance | 205 | PRESSURES on the American Physician | 77 |
| LEUKEMIA: Epidemiology | 255 | PROGRESS Notes | 89, 93, 153 |
| Errata | 427 | PROSTATE, Carcinoma, Rectal Obstruction | 211 |
| LEWIS, Robert V. (Photo) | 276 | Erratum | 287 |
| LINACRE, Thomas | 550 | PROTHROMBIN Time, Preoperative Vitamin K ₁ | 151 |
| LITTLE Known Scientific Principles | 17 | PROVIDENCE Medical Association | |
| LIVER, Hamartomatous Cyst | 420 | Minutes | 15, 62, 127, 343 |
| LIVER, Needle Biopsy | 149 | Officers | 64 |
| LIVER vs. Bone | 539 | President's Address | 77 |
| MACDONALD, William J. (Photo) | 274 | RADIOIMMUNOASSAY | 501 |
| MANPOWER, Paramedical Programs | 321 | RECTAL Obstruction, Carcinoma, Prostate | 211 |
| MAMMARY Artery Implantation (Dog) | 458 | Erratum | 287 |
| MANUSCRIPTS Rules, RIMJ | 158, 476 | REGIONAL Medical Programs | 377, 384, 386 |
| MASTERS in Medicine | 33, 91, 422, 467, 550 | RELATIONSHIPS, Hospitals and Physicians | 417 |
| Errata | 130, 157 | RHODE Island Blue Cross Corporation | |
| MATERNAL Mortality | 581 | Annual Meeting | 266 |
| MEDEX: A Regional Experiment | 316 | RHODE Island General Assembly | |
| MEDICAL Care for Tomorrow | 310 | Health, Welfare Legislation | 437 |

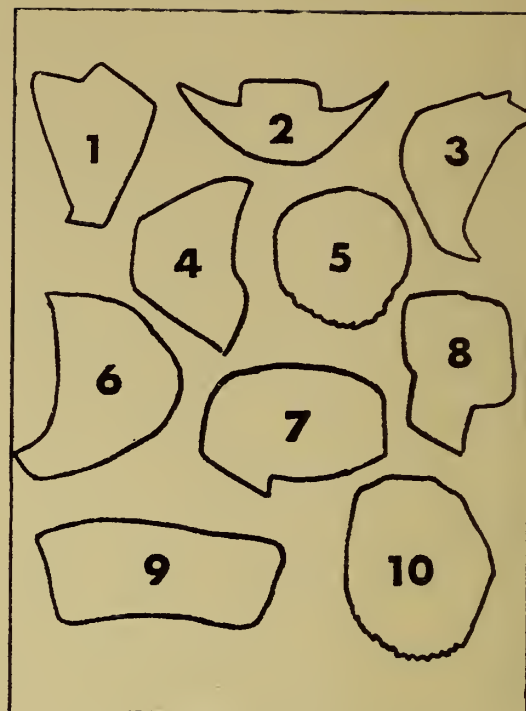
SUBJECT INDEX

| | Page | | Page |
|---|-------------------------|---|------------------|
| RHODE Island Health Services | 139 | TARNISHED Image, Higher Education | 38 |
| RHODE Island Junior College Nursing Program .. | 27 | TENDINITIS, Rotator Cuff | 367 |
| RHODE Island Maternal Mortality | 581 | THROUGH the Microscope | 64, 221 |
| RIMJ Ownership Statement | 521 | TRI-STATE RMP | 377, 384 |
| RHODE Island Medical Society | | Two Sentence Essay | 128, 432 |
| Annual Meeting | 278 | UNNECESSARY Surgery | 478 |
| Bylaw Revision | 560 | VACCINATION and Sinusitis | 577 |
| House of Delegates | 117, 239, 293, 527, 569 | VITAMIN K ₁ , Preoperative | 151 |
| Necrology, 1970 | 18 | WASHINGTON County Medical Society | |
| Officers, Committees | 279 | Minutes | 177, 536 |
| President's Address (Outgoing) | 307 | WASHINGTON Scene | 12, 69, 129, 197 |
| President's Message (Incoming) | 275 | WATERHOUSE, Benjamin | 157 |
| RHODE Island Medical Society Physicians Service | | WATERMAN Cancer Dialogue, Program | 220 |
| Annual Report | 269 | WELCH, Claude Emerson | 217 |
| President's Report | 263 | WHAT Is Professional Nursing? | 164 |
| RUBENSTEIN-Taybi Syndrome | 84 | WILLIAMS, Francis Henry, X Ray Anniversary .. | 422 |
| Photographs | 163 | WOMAN Physician, Rhode Island's First | 546 |
| SCANNING the Medical Literature | 164, 172, 230, 564 | WOMAN's Auxiliary | |
| SEXUAL Maniacs, Hormone Treatment | 337 | President's Report, 1971 | 304 |
| SHOULDER, Painful | 367 | WOONSOCKET District Medical Society | |
| SMALLPOX Vaccination, Complications | 577 | Minutes | 59, 127 |
| SPLENECTOMY, Hodgkin's Disease | 455 | X-RAY Anniversary, F. H. Williams | 422 |

RHODE ISLAND MEDICAL JOURNAL

| | |
|---|----|
| PRACTICAL NURSING | |
| A. Rose Frantantuono, R.N. | 25 |
| RHODE ISLAND JUNIOR COLLEGE ASSOCIATE DEGREE NURSING PROGRAM | |
| Catherine McGoldrick, R.N. | 27 |
| BACCALAUREATE EDUCATION IN RHODE ISLAND | |
| Barbara L. Tate, Ed.D. | 29 |
| THE PROFESSIONAL ASSOCIATION'S ROLE IN EDUCATION | |
| Catherine Graziano, R.N. | 32 |
| Masters In Medicine: NURSE AND PATIENT | |
| William Osler, M.D. | 33 |
| 1970 NURSE OF THE YEAR AWARD | |
| Maurice Adelman, M.D. | 37 |
| THE TARNISHED IMAGE OF AMERICAN HIGHER EDUCATION | |
| Rev. Joseph L. Lennon, O.P. | 38 |
| EDITORIALS | 43 |
| DERMAQUIZ | 48 |
| DISTRICT MEDICAL SOCIETY MEETING | 15 |
| EDALOGY | 48 |
| NECROLOGY | 18 |
| PERIPATETICS | 16 |
| REPORT OF THE AMA HOUSE OF DELEGATES | 5 |
| THE WASHINGTON SCENE | 12 |

COVER: Caps representing the ten Rhode Island Schools of Nursing: **1.** Salve Regina College; **2.** Our Lady of Fatima School of Practical Nursing; **3.** St. Joseph Hospital; **4.** U.R.I. College of Nursing; **5.** R. I. Junior College Associate Degree Program; **6.** Newport Hospital; **7.** Memorial Hospital, Pawtucket; **8.** Roger Williams Hospital; **9.** R. I. School of Practical Nursing; and **10.** Rhode Island Hospital.



EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



Robert V. Lewis, M.D., Chairman

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

John A. Dillon, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 25 cents — Subscription \$2.00 per year. Second-Class postage at Providence, Rhode Island. Copyright, 1970.

House of Delegates of the American Medical Association

*Report of Clinical Session, Boston, Held
November 29-December 3, 1970*

By Edmund T. Hackman, M.D., Delegate and
Seebert J. Goldowsky, M.D., Alternate Delegate
from Rhode Island

HEALTH CARE COSTS

Voted that the AMA seek immediate adjustment of all third party health financing programs to provide equal coverage for physicians' services, wherever rendered, and also that the AMA seek the removal of restrictions in any third party health financing program which would require inpatient hospital confinement where ambulatory services would be effective, in order for applicable benefits to be paid.

Voted that the AMA reaffirm its policy that reimbursement for physicians' services under both private and government financing programs be made on the basis of usual, customary or reasonable fees, and that the determination of such fee be solely the responsibility of a duly constituted committee of his peers and may not be determined by any other person, organization or agency, and further that the AMA continue its opposition to legislation pending before Congress which would single out the medical profession to establish arbitrary fee limitations.

CONSIDERATIONS IN DEVISING AN OVERALL HEALTH PLAN

Report U submitted by Doctor Roth, Speaker of the House, came in for high praise, and the

House voted that the report be published in AMA news and publicized by state medical societies.

ASSOCIATION OF PROFESSIONS

Constituent medical societies of the AMA were urged to take leadership in the formation of State associations of the professions to provide a vehicle for interprofessional cooperation in those areas where united activity of the various professions can be of great benefit.

IMMUNITY FOR PEER REVIEW COMMITTEES

The Board of Trustees was asked to explore the possibility of immunity being provided by administrative action of the Social Security Administration, or by legislative action in Congress, and by other federal departments and agencies, for physicians participating in peer review under federal programs, and implementing any action deemed feasible. State societies were also urged to consider the feasibility of legislation for immunity of peer review committee members from litigation arising from the actions of the committee.

MEDICAL EDUCATION

The House concurred with a Board of Trustees report which presented a pluralistic approach
(Continued on Page 9)

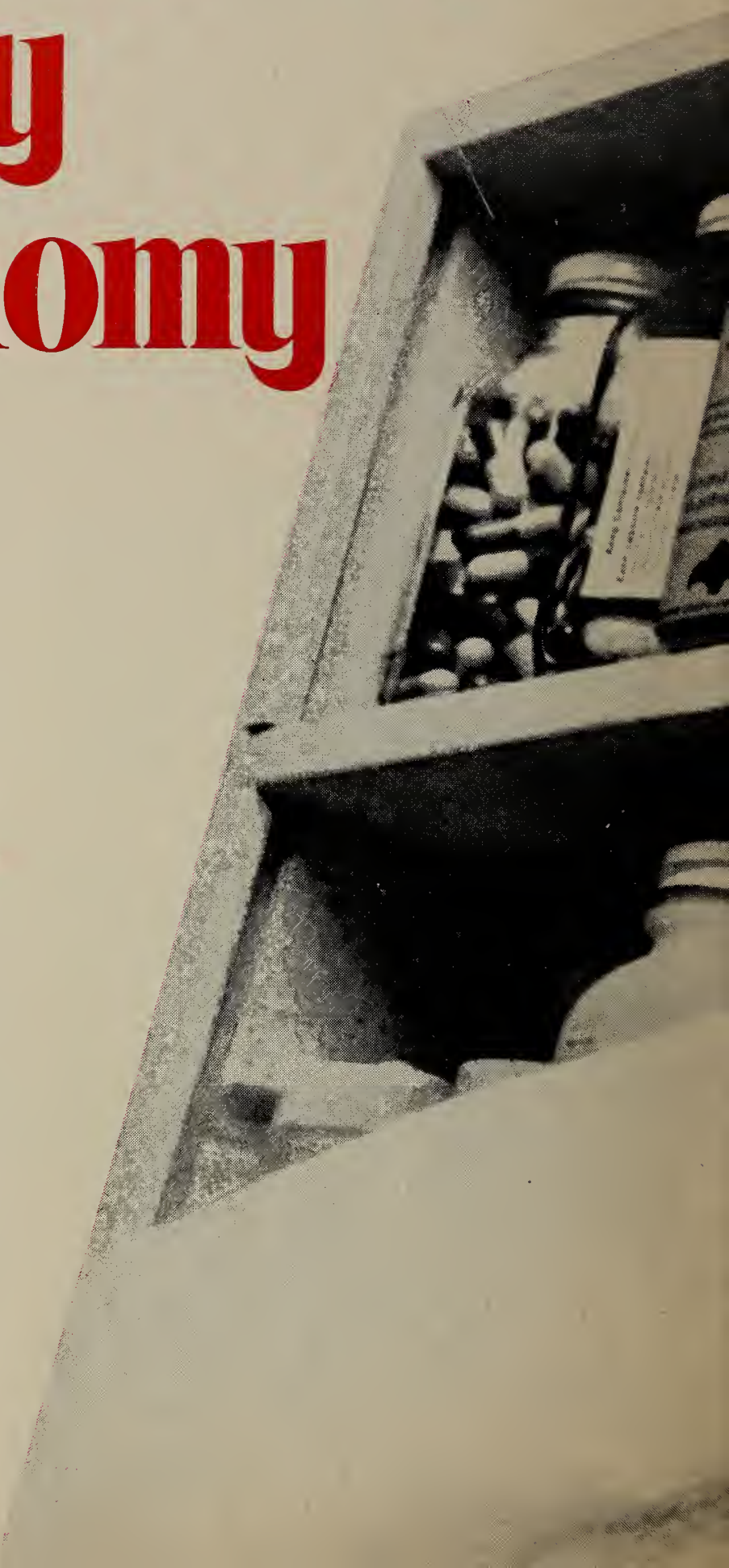
Guide his hand to quality and economy

Specify
Deltasone[®] 5 mg.
(prednisone, Upjohn)

an economical
prednisone
that's made
a name for itself

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001



AMA HOUSE OF DELEGATES

(Continued From Page 5)

through which the profession may provide voluntary incentives for physicians to maintain high levels of professional competence, as being far superior to proposals for compulsory relicensure or other legislative requirements. On the matter of licensure of health occupations the House adopted a very lengthy and comprehensive report which reviews the role of the physician assistant, and makes recommendations for his certification.

PRACTICING PHYSICIANS ON HOSPITAL GOVERNING BODIES

The House voted that where legally permissible, physicians actively practicing in the community who are voting members of the medical staff shall be eligible for, and should be accorded, membership on hospital governing bodies, and their action committees, with full voting privileges, in the same manner as are other knowledgeable and effective individuals. Other physicians should also be considered eligible for membership on governing bodies.

* * *

State societies were also urged of the importance of having interested practicing physicians serve on state, regional, and local Health Advisory Councils and similar groups in their respective geographical areas.

* * *

The Council on Medical Service of the AMA was asked to review the advisability of state and local medical societies, in cooperation with state and local hospital associations, or groups, to establish suitable boards to mediate physician-hospital disputes.

OPPOSITION TO LEGALIZATION OF MARIJUANA

The House adopted a report from the Board of Trustees which reaffirmed the 1969 policy statement on Cannabis which pointed out the danger of marijuana, opposed the legalization of the sale and possession of the drug, called for appropriate penalties for offenders, encouraged research on the drug, and approved continuation of educational programs to all segments of the population with respect to the use of marijuana.

BLOOD FOR MEDICAL USE

A report of the Board of Trustees on this subject was adopted, with one of the major policy statements the following:

"The public interest requires and the state medical associations are urged to see the enact-

ment of appropriate state legislation which will provide that any person or organization involved in the collection, processing, distribution or administration of blood of other bodily tissues or substances or biological substances for medical use shall be liable for any injury suffered by a patient *only if* the injury was proximately caused by the negligence of such person or organization."

PROFESSIONAL LIABILITY

A collection of "suggested Professional Liability Legislation" was submitted and constituent state associations were urged to give such legislation careful consideration. (Comment: Our Medical-Legal Committee has already discussed this type of legislation with the Rhode Island Bar Association members of the committee, and need for it is not considered necessary at this time in Rhode Island.)

The House was informed that there has been a breakdown in negotiations for AMA sponsored liability insurance programs. (The Continental Insurance Company reported it has withdrawn its original interest in a national program.)

(Continued on Page 11)

COMPLETE, ACCURATE AND PROMPT ANALYSIS

HOPKINS MEDICAL LABORATORY

335 Broadway

Providence, Rhode Island

Tel. 421-3100

Res.: 353-2272

Angelo G. Viticone, AB;MT.

Director

Ascanio Di Pippo, Ph.D.

Biochemistry

Donald Mattera, B.S.,M.T.

Gone with the wind



AMA HOUSE OF DELEGATES

(Continued From Page 9)

REGIONAL MEDICAL PROGRAMS

The Board of Trustees was asked to consider, and take appropriate action, on a resolution condemning activities of some Regional Medical Programs directed towards restructuring the method of delivery and financing of health care in violation of provisions of Public Law 89-239.

TEACHER PREPARATION IN HEALTH EDUCATION

The House reaffirmed the AMA position urging a sound sequential health education program for grades kindergarten through 12, and that all prospective teachers and administrators be required to participate in professional courses of health education in order to qualify for certification recommendation, and that in-service training programs be offered in various school districts. (The Rhode Island Medical Society committee on Child-School Health made such recommendations to the school authorities a year ago, but formal programs have not been announced for such educational plans.)

ABORTION

The House voted that the AMA use its influence with local medical societies to urge that proper disciplinary action be taken whenever physicians are involved in the solicitation of patients for abortion or any other medical service. (Comment: This action arose as the result of letters to physicians throughout the country from New York and California physicians, and agencies, seeking patients for abortion to be done in these states where the laws are lenient.)

After lengthy discussion in a reference committee, and during the House session, it was voted to re-affirm the 1970 AMA policy on abortion.

However, it was pointed out that portions of the 1967 policy statement not inconsistent with the 1970 statement, are still valid.

Report U of the AMA Board of Trustees
Subject: Considerations in Devising an Overall Plan — Prepared by Dr. Roth

Presented by: Max H. Parrott, M.D., Chairman
Referred to: Reference Committee B (C. Willard Camalier, M.D., Chairman)

The Board of Trustees met recently with Dr. Roger Egeberg, Assistant Secretary for Health, HEW, for a general discussion of a national health program. After that meeting Dr. Russell Roth, Speaker, prepared comments which were submitted to HEW.

The Board believes these comments are of such interest that it is transmitting them to the House of Delegates for information.

Thesis:

The principal resource for meeting the medical service needs of the nation is the existing supply of practicing physicians.

First priority is for using effectively those practicing physicians we now have.

Second priority is to do those things which may be done to increase the productivity of physicians.

Third priority is to augment the number of physicians.

Fourth priority is to use the physician effectively in his role as a conservator of expenditures by and in behalf of his patients.

Considerations in respect to the first priority (effective use):

There has been a substantial "flight from practice," and especially from general practice, which has intensified our problems in the delivery of medical service. The factors which have caused this exodus from direct patient care should be recognized and, to the extent possible, eliminated. There has also been the disturbing fact that although new physicians are being trained at a rate

(Continued on Page 49)

Con- ven- ience!

Dicarbosil®

ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

The Washington Scene

A Summary Report Prepared by the Washington Office of the American Medical Association



The American Medical Association emphasized that the quality of medical care should not be sacrificed for the sake of economy in government health care programs.

Dr. William O. LaMotte Jr., of Wilmington, Del., chairman of the AMA's Council on Legislation, repeatedly stressed the importance of assuring high quality care in testimony at a Senate Finance Committee hearing on proposed changes in Medicare and Medicaid.

He also pointed out the advantages of the AMA's plan for review of physicians' services aimed at holding down costs over an alternative proposal before the committee. The AMA supported a provision of the proposed legislation that would provide for physical therapy services but opposed including chiropractic services under Medicare.

Dr. LaMotte said that there should be pilot projects before a "Health Maintenance Organization" program is started nationwide. A HMO would provide both hospitalization and physicians' services for Medicare patients for a set per capita amount.

"There are questions regarding in-fact cost savings, as well as the quality of health care which may be provided when there are economic incentives to providers to reduce utilization," the AMA spokesman said. "We wish to assure that Medicare patients uniformly receive the best quality care.

"To this point of quality care, we have one additional concern. As defined in the bill, the HMO may be a 'for-profit' organization and one managed, controlled and operated by lay individuals. Under such circumstances, the incentive for profit and/or lack of the basic essentials of knowledge, training and experience in medical

matters could result in the patient being furnished less than the optimum of quality care. To avoid such a result, we recommend that organizations delivering health care should be under the control and guidance of medical personnel."

Dr. LaMotte also questioned the desirability of a provision that would restrict payments to institutions.

"Will this section create different classes of services based upon the ability or desire of patients to pay for additional services?" Dr. LaMotte asked. "A goal of Medicare was to make available to all over 65 persons the same level of health care available to other individuals. Has that goal now been changed?"

He assured the committee that the nation's physicians as a group "share the concern of the public and the Congress" concerning rising health care costs. But, he said, the AMA must oppose a provision that would substitute an arbitrary statutory limitation on physicians' fees for the "reasonable" fee allowed. He said cost factors were too complex for such a simple solution and that the arbitrary limitation would make the medical profession the only sector of the nation's economy under price or wage controls.

As for utilization or peer review, Dr. LaMotte said the AMA objects "most forcefully" to a provision of the pending legislation that would have non-medical groups act as review teams and pass judgment on medical services.

Following Dr. LaMotte's testimony, the committee modified somewhat the professional review amendment sponsored by Sen. Wallace F. Bennett of Utah, second-ranking Republican on the committee, after he earlier heard an AMA spokesman advocate the peer review principle.

(Continued on Page 13)

(Continued on Page 12)

(Continued on Page 12)

Meade Whitaker, tax legislative counsel for the Treasury Department, asked the committee to add a provision to the legislation that would require health insurance companies and carriers to report unassigned payments to physicians and other providers of health care. Unassigned payments go directly to patients to be given by them to their physicians. A similar proposal was knocked out of last year's tax reform legislation by a House-Senate conference committee.

Whitaker said the Internal Revenue Service had found that more than half of 3,000 physicians who received \$25,000 or more in government Medicare or Medicaid payments in 1968 failed to report a substantial amount of their income to the tax agency.

“Preliminary results indicate a number of instances of substantial unreported income, including some where the omission exceeds \$100,000,” Whitaker said.

The committee had turned over to the IRS the names of 11,000 doctors who had received Medicare or Medicaid payments exceeding \$25,000 in 1968. Whitaker said 4,000 of the 11,000 doctors "justified detailed audit" and 3,000 of the audits were nearly complete, and that "about half of the

Sen. Russell B. Long (D., La.) said the investigation had disclosed a "vast area of tax cheating" and urged the IRS to initiate criminal prosecutions against doctors who had hidden their Medicare or Medicaid income.

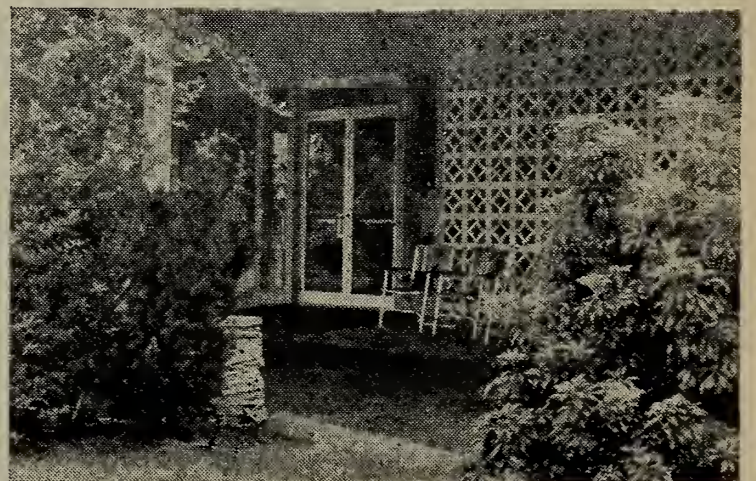
Long agreed with the AMA as to NOT including chiropractic services in the Medicare program. He told a chiropractic spokesman testifying before the committee:

* * *

The Nixon Administration came out strongly against the cradle-to-grave comprehensive national health insurance legislation sponsored by

(Continued on Next Page)

A Participating Extended Care Facility In Federal Medicare



Ethically Managed

JCAH Accredited

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

559-9

Sen. Edward M. Kennedy (D., Mass.) and supported by organized labor leaders.

John G. Veneman, Under Secretary of Health, Education and Welfare, testified before the Senate Committee on Labor and Public Welfare, that the program would be provided by the legislation "is not a proper or workable approach to the solution of the health problems of this nation" and would cost \$77 billion in the first year or full operation.

The committee held hearings on the legislation this year only to publicize it and to provide a forum for its supporters to expound their views. The sponsors resorted to a gimmick—a change in the financing provision—to get it before the labor and public welfare panel after it first was sent to the finance committee which ordinarily handles such legislation. The same maneuver was used in 1949 to get a hearing on President Truman's national health insurance proposal. Kennedy and six co-sponsors of his legislation are members of the labor and public welfare committee.

"There are those who insist that the present system is sound and should be left alone," Veneman said. "Others demand that we throw out the baby with the bath water and replace our pluralistic health enterprise with some monolithic scheme in which the Federal Government controls everything.

"I think both points of view are wrong. The deep troubles of the health care enterprise have been nurtured by many factors, not the least of which is past failure to plan and prepare for the soaring demand that observant people knew was coming. But I do not believe that past neglect means that we now have to start over and pursue some course of action that would be entirely alien to our basic traditions.

"The central issue, over and above the inconceivable commitment of general fund revenues for S. 4323, is whether such a drastic abandonment of existing mechanisms in our health care system is necessary to remedy the defects in the system and whether, in fact, it may not create more problems than it will solve . . .

"Government is currently purchasing more than 36 per cent of the total output of the health care system. This figure indicates that the use of its purchasing power is probably the government's primary source of leverage to initiate changes in the organization and delivery of health care. As government becomes more involved in financing it also has a greater responsibility to remedy the defects in the system.

(Concluded on Page 54)

RHODE ISLAND MEDICAL JOURNAL

District Medical Society Meeting

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Association was held at the Rhode Island Medical Society Library in Providence on Monday, November 2, 1970. The meeting was called to order by the President, Dr. Bertram H. Buxton, Jr., at 8:30 p.m.

MINUTES OF PREVIOUS MEETING

Doctor Buxton noted that the minutes of the October meeting would be published in the Rhode Island Medical Journal, and therefore a reading of them would be omitted.

REPORT OF THE SECRETARY

Doctor Joseph E. Caruolo reported that the Executive Committee recommended for election to active membership the following physicians:

Jaime E. Chamorro, M.D., of Providence

Jacques M. Rathle, M.D., of Cranston

Action: A motion was made, seconded and voted that the physicians nominated be elected to active membership.

ANNOUNCEMENTS BY THE PRESIDENT

The President called to the attention of the members that there would not be a December meeting of the Association since the AMA would be holding its annual clinical convention at Boston all the previous week and therefore a scientific program by our Association on the following Monday seemed unnecessary. He noted that the next meeting would be the annual meeting to be held on Monday, January 4, 1971.

* * *

Doctor Buxton awarded membership certificates to those physicians elected at the October meeting.

* * *

Doctor Buxton stated that it was with deep regret that he had to announce the unexpected death the previous day of Dr. Clarence Riley who had been very active for years in behalf of the Association, having served as chairman of the committee that has arranged the annual golf tourney

and annual dinner. He called for a moment of silent prayer in memory of Doctor Riley.

SCIENTIFIC PROGRAM

The President introduced as the guest speaker Dr. Kristaps J. Keggi of Waterbury, Connecticut. Doctor Keggi, Assistant Clinical Professor of orthopedic surgery at Yale University Medical School, lectured on the "Total System Approach to Trauma".

Doctor Keggi brought to the awareness of the Society that in the highly technical and mechanized world in which we now live that it is hardly enough to know how to treat a particular injury, let us say in any particular point in the history of that injury. He made us realize that the end result of an injury is dependent on every phase of its handling. For example, he started out by emphasizing prophylaxis in the trauma of auto accidents. Etiologic factors such as driver qualification, engineering of roads, safety features of automobiles, control of alcoholism all are enormously important. He then moved on to a consideration of first aid at the scene which involves equipment available at the scene of an accident, the degree of training of the first people of the medical world to encounter the patient, namely the ambulance personnel, and other similar considerations. We then were told of the problems of transportation, those of getting the patient to a suitable medical facility, and how in the case of accidents along desolate stretches of super highways helicopters must play a role. The new field of accident room medical practice, he said, is a fast developing one and frequently determines the final outcome of a case. Basic treatment will always be perhaps the cornerstone of what can be done for the injured patient. After this, rehabilitation becomes important. All these factors were likened to a chain. And we know any chain is no stronger than its weakest link. The medical profession, he said, has long been aware of the importance of each of the

(Concluded on Page 52)

RELIEVE



**BACK
PROBLEMS**

**Freeman
SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS**

HOME TRACTION

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

Peripatetics

By Robert V. Lewis, M.D.

At the joint meeting of the New England Dermatological Society and the Rhode Island Dermatological Society at the Roger Williams General Hospital, November 4, 1970, FRANCESCO RONCHESE was presented with an engraved plaque, honoring him as the first President of the Rhode Island Dermatological Society 20 years ago.

* * *

IRVING A. BECK recently presented a paper before the Countway Library Association at the Harvard Medical School on the subject, Collecting Medical Americana: Adventures and Misadventures.

* * *

ISRAEL DIAMOND, Chairman of the Department of Pathology at Roger Williams General Hospital, spoke to a group of 25 businessmen at the Second Annual Businessman's Luncheon at the hospital. Diamond discussed advanced equipment and future development of the Hospital Laboratory.

* * *

STEPHEN R. KAPLAN of the Department of Medicine at Roger Williams General Hospital discussed the platelet donor program practiced in the hospital's blood bank at a recent meeting of the Providence Junior Chamber of Commerce.

* * *

A. A. SAVASTANO was appointed by Governor Frank Licht to the State Board of Regents to succeed the late Frank A. Gammino. The governor said Savastano is "eminently qualified to serve with distinction."

* * *

WALTER R. DURKIN, Chief of the Obstetrics Department at St. Joseph's Hospital, was honored recently by the Sophia Little Home, a United Fund agency for unwed mothers, for his leadership role in founding and continuing the hospital's Maternal-Infant Care Project.

* * *

Honored at the quarterly meeting of St. Joseph's and Our Lady of Fatima Hospital's Medical Staffs were ALPHONSE R. CARDI, immediate past president of the St. Joseph's Medical Staff Association; and ALVIN GENDREAU, immediate past president of Fatima Hospital's Staff Association.

(Continued on Page 21)

LITTLE KNOWN SCIENTIFIC PRINCIPLES AND LAWS

MURPHY'S LAW — If anything can go wrong, it will.

SKINNER'S CONSTANT — That quantity which, when multiplied by, divided by, added to, or subtracted from the answer you get, gives you the answer you should have gotten. (Also known as Flannegan's Finagling Factor)

HORNER'S FIVE-THUMB POSTULATE — Experience varies directly with equipment ruined.

CAHN'S AXIOM — When all else fails, read the instructions.

GUMPERSON'S LAW — The probability of a given event occurring is inversely proportional to its desirability.

CHISHOLM'S LAW OF HUMAN INTERACTION — Any time that things appear to be going better, you have overlooked something.

RIDDLE'S CONSTANT — There are co-existing elements in frustration phenomena which separate expected results from achieved results.

RULE OF ACCURACY — When working toward the solution of a problem, it always helps if you know the answer. **ADVANCED COROL-**

LARY — Provided, of course, you know there is a problem.

PARKINSON'S PHILOSOPHY — Systems sufficiently large produce no effect.

THEORY OF INTERNATIONAL SOCIETY OF PHILOSOPHIC ENGINEERING — In any calculation, any error which can creep in, will.

SUTTON'S LAW — Mr. Sutton, infamous robber, whose activities were confined to bank robberies, when questioned as to why this predilection only for banks replied glibly, "That's where the money is." Hence, in attacking any problem, "Go where the money is."

THOMAS NIXON CARVER'S LAW — On the gap in political thinking and communication between right and left, "Radicals read only radical literature; conservatives read nothing."

ROBERT V. LEWIS, M.D.

ACKNOWLEDGEMENT: Clinical Pathology Bulletin, Department of Pathology, Providence Hospital, Southfield, Michigan from which most are quoted directly, and from a previous compilation by Advanced Instruments, Inc.



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy,

during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

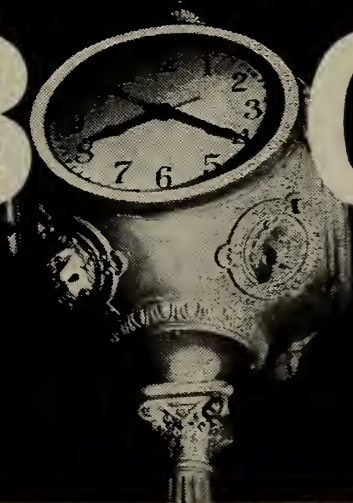


Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

one capsule for the rest of the night

Noludar[®] 300
(methypylon)



Rhode Island Medical Society - Necrology, 1970

HAROLD L. COLLOM, M.D.

Harold L. Collom, M.D., a retired Warwick physician who had been first chief of staff and first director of medical education at the Kent County Memorial Hospital, died on December 16, 1970, at the age of 69.

A native of Pennsylvania, Doctor Collom was graduated from Allegheny College in 1922, and from Hahnemann Medical School in Philadelphia in 1930. He took postgraduate work at Harvard and at the School of Tropical Medicine at the University of Liverpool, England.

He established practice in Warwick in 1931, and in addition to his medical career he took a very active interest in the Warwick city government. He served as councilman and also as a member of the Warwick school committee.

During World War II he served with the Army Medical Corps in England and France, and after the war he joined the Army reserve, serving as commanding officer of the 455th General Hospital in Providence from 1951 until 1959.

Doctor Collom was a member of the Kent County Medical Society, the Rhode Island Medical Society, and the American Medical Association.



JOSEPH C. FLYNN, M.D.

Joseph C. Flynn, M.D., of Providence, died March 30, 1970 at the age of 62.

He was a graduate of Providence College, and Boston University School of Medicine. He served in the Army in World War II with the rank of captain. He was a member of the Providence Medical Association and the Rhode Island Medical Society.



JAMES HAMILTON, JR., M.D.

James Hamilton, Jr., M.D., of Providence, died January 4, 1970. He was 86 years old, and was retired from active practice for several years.

Born in Cranston, Doctor Hamilton was graduated from Brown University in 1906. He received his medical degree in 1910 from Yale University Medical School, and he served an internship at Rhode Island Hospital.

He was a lieutenant in the Army Medical Corps during World War I.

Doctor Hamilton was a member of the American Medical Association, the Rhode Island Med-

ical Society, the Providence Medical Association, and the American College of Physicians and Surgeons.



ISRAEL MANDELL, M.D.

Israel Mandell, M.D., of Providence, died March 8, 1970, at the age of 68.

Born in Revere, Massachusetts, Doctor Mandell was graduated from Harvard School of Dental Medicine, and Middlesex Medical School.

Doctor Mandell was a member of the American Medical Association, the Rhode Island Medical Society, and the Providence Medical Association.



WILLIAM A. McDONNELL, M.D.

William A. McDonnell, M.D., a practicing anesthesiologist, died July 27, 1970. He was 56 years old.

Born in Cranston, he was a graduate of Providence College, and Georgetown University Medical School. He interned at St. Joseph's Hospital, Providence. He was a major in the Air Force during World War II, and later served a residency in anesthesiology at the Lahey Clinic in Boston.

Doctor McDonnell had been chief anesthesiologist for 20 years at St. Joseph's and Our Lady of Fatima Hospitals and recently was associated with the Anesthesia Associates of Providence.

He was Treasurer of the Providence Medical Association, a member of the Rhode Island Medical Society, the American Society of Anesthesiologists, and the Providence College Alumni Association.



JOHN T. MONAHAN, M.D.

John T. Monahan, M.D., of Providence, died January 29, 1970. He was 85 years old.

Born in Hopkinton, Massachusetts, he was a graduate of Tufts Medical School. He served internships at Union Hospital, Fall River, and at St. Joseph's Hospital in Providence. He served for many years as a school physician in Providence.

He was a member of the Rhode Island Medical Society, the Providence Medical Association, and the American Medical Association.



JOHN H. O'BRIEN, M.D.

John H. O'Brien, M.D., of East Providence, died November 7, 1970, at the age of 64.

A native of East Providence, he graduated from Providence College in 1928 and from Georgetown University Medical School in 1932. He interned at Memorial Hospital, Pawtucket, and at Chapin Hospital in Providence.

He was a member of the American College of Surgeons, the Rhode Island Medical Society, and the Providence Medical Association.

▲ ▲ ▲

LEWIS B. PORTER, M.D.

Lewis B. Porter, M.D., a retired otolaryngologist, died May 26, 1970. He was 94 years old.

Born in New Haven, Connecticut, he was graduated from Yale Medical School in 1898. He interned at New Haven Hospital and he was an Army surgeon in the Philippines in 1900.

During World War I, he served with the Rhode Island Base Hospital Unit in Queenstown, Ireland.

He was a member of the American College of Surgeons, the Rhode Island Medical Society, the American Academy of Ophthalmology and Otolaryngology, the Triological Medical Association. He was a member also of the Providence Medical Association of which he was Secretary from 1912-1913.

▲ ▲ ▲

CHARLES B. POTTER, M.D.

Charles B. Potter, M.D., 62, a Providence obstetrician and gynecologist, was shot to death in the parking lot of Lying-In Hospital in Providence on December 10, 1970 by one of two men whom police believed were seeking narcotics.

A native of Providence, Doctor Potter was a Phi Beta Kappa graduate of Brown University in 1931, and four years later he was graduated from the College of Physicians and Surgeons of Columbia University. He served internships at Michael Reese Hospital in Chicago, the Providence Lying-In, and the Charles V. Chapin Hospital. He established private practice in obstetrics in Providence in 1939.

He was active in Planned Parenthood, an organization with which he had been associated from the time he started practice in medicine, and he had been a recent recipient of the organization's highest award, the Margaret Sanger medal. He also served for several years on the Committee on Maternal Health of the Rhode Island Medical Society.

He was an accomplished photographer, a world traveler, and a collector of paintings and sculpture. Doctor Potter was a member of the Providence Medical Association, the Rhode Island Medical Society, the American Medical Association,

and the American Academy of Obstetrics and Gynecology.

▲ ▲ ▲

CLARENCE J. RILEY, M.D.

Clarence J. Riley, M.D., of Providence, died November 1, 1970. He was 66 years old.

A native of Providence, he was graduated from Providence College, and from Georgetown University Medical School in Washington, D.C. He interned at St. Joseph's Hospital.

Doctor Riley was a major in the Medical Corps of the U. S. Army Air Corps during World War II. While on duty in Iceland, he received the Soldiers' Medal.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, and the American Medical Association.

▲ ▲ ▲

CARL D. SAWYER, M.D.

Carl D. Sawyer, M.D., of Providence, died February 7, 1970. He was 91 years old.

Doctor Sawyer was graduated from Bates College in Lewiston, Maine, in 1903, and he received his medical degree from McGill University in Montreal. In 1908, he served a pathological internship at Rhode Island Hospital and in 1909 he was appointed as assistant pathologist on the hospital staff, prior to entering private practice in Providence.

He was a member of the Providence Medical Association, Rhode Island Medical Society, the American Medical Association, and the New England Dermatological Society.

▲ ▲ ▲

WILLIAM P. SHIELDS, M.D.

William P. Shields, M.D., a Providence pediatrician, died Thursday, January 8, 1970.

A native of Providence, he was a graduate of Providence College, and also from Jefferson Medical School in Philadelphia. He served his internship at Philadelphia General Hospital.

He was former chief of pediatrics of St. Joseph's and Our Lady of Fatima Hospitals.

He was a member of the American Academy of Pediatrics, the Rhode Island Medical Society, the Providence Medical Association, and the American Medical Association.

▲ ▲ ▲

ANGELO VALENTINO, M.D.

Angelo Valentino, M.D., of Providence, died Monday, February 9, 1970. He was 69 years old.

A Providence native, he was graduated from Brown University in 1922, and from Harvard Uni-

(Concluded on Page 53)

Prognosis :
"EXCELLENT!"

As a conscientious physician, you make a prognosis based on examination, the patient's history, and consultation, plus your own experience and judgment.

As responsible wine merchants, we too, are meticulous in our way. We don't buy at random. We *select* carefully from among the world's finest wines. We care for them properly, making certain they are stored at the right temperature. Proudly, we have for your selection more than 2,000 types of wines. That's one-third more than any New York store stocks.

Is it any wonder we're proud of what we sell, and why you'll be proud to enjoy fine wine from Town Liquor? The prognosis just has to be "EXCELLENT."
(Join our Vintage Guild. It's free!)



CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

The Rhode Island Group Health Association

plans to begin group practice opera-
tions Spring 1971.

All interested physicians are invited to
make inquiry as to program and op-
portunities:

Please contact:

Martin Posner, M.D., M.P.H.

Medical Director

Rhode Island Group Health
Association

139 Mathewson Street
Providence, Rhode Island
Tel. 272-3250

PERIPATETICS

(Concluded From Page 16)

RALPH F. PIKE, and JULIUS MIGLIORI were installed as the new co-presidents of the Medical Staff of the merged hospitals.

* * *

Approximately 90 physicians from Rhode Island attended the 24th Clinical Convention of the American Medical Association in Boston November 29-December 2.

Heading the delegation from Rhode Island were: RICHARD P. SEXTON, President of the Rhode Island Medical Society; WILLIAM J. MACDONALD, President-elect; EDMUND T. HACKMAN, Delegate to the American Medical Association; SEEBERT J. GOLDOWSKY, Alternate Delegate to the American Medical Association and Editor of this Journal; JOHN E. FARRELL, Executive Secretary; and EDWARD J. LYNCH, Assistant Executive Secretary.

Also in attendance were JOHN J. CUNNINGHAM, Past President of the Society, and Speaker of the House; MRS. JOHN J. CUNNINGHAM, President of the Woman's Auxiliary to the Rhode Island Medical Society; CHARLES L. FARRELL, Past President of the Society, and CHARLES J. ASHWORTH, AMA Council on Medical Service.

Also attending were the following members of the House of Delegates of the Society: FREEMAN B. AGNELLI; RAUL NODARSE; and JOSEPH L. C. RUISI.

Also PAUL E. BARBER, Delegate of the Kent County Medical Society to the Council; ROBERT L. CONRAD, Chairman of the Society's Disaster Committee; RUSSELL P. HAGER, Chairman of the Hospital Physician-Relations Committee; JOHN A. ROQUE, Chairman of the Committee on Nutrition and Metabolism; PATRICK R. LEVESQUE, Chairman of the Woonsocket District Peer Review Committee; EDMUND C. BILINGS, President of the Pawtucket Medical Association; HERBERT P. CONSTANTINE, Administrator of the Multiphasic Screening Program; and P. JOSEPH PESARE, Director of the Medical Care Program of the Department of Social and Rehabilitative Services.

Registered at the Clinical Meeting were 39 phy-

sicians from the Providence Medical Association; six from the Newport District Medical Society; three from the Woonsocket District Medical Society; eight from the Pawtucket Medical Association; seven from the Kent County Medical Society; and six from the Washington County Medical Society.

* * *

WALTER R. THAYER, JR., director, Division of Gastroenterology, Rhode Island Hospital, was invited to participate in the Skandia International Symposium on Regional Enteritis (Crohn's Disease), held in Stockholm, September 29 to October 1. Thayer spoke on "Some Thoughts on Immunological Factors in Crohn's Disease."

In July, Thayer was asked by the Danish Gastroenterological Association to give the first quadrennial Review on Crohn's Disease at the 4th World Congress of Gastroenterology, which was held in Copenhagen from July 12 to July 18.

⌘ ⌘ ⌘

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

Tel: — 831-4833

Providence, Rhode Island

Noludar® 300

(methypyrlyon)

one capsule
for the rest
of the night



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.



Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Practical Nursing

Practical Nurse Has Made A Valuable Contribution To The Nursing Needs Of The Community

By A. Rose Fratanuono, R.N.

Nursing may be defined in many terms, some more complex than others, but perhaps nursing can best be described as the giving of direct assistance to a person because of his inability to care for himself due to some mental or physical disability. The word "nursing" comes from a variety of meanings such as "to nourish", "to attend", and "to take care of". Through the centuries people have been assisting each other; therefore the term "practical nurse" has been in existence for some time. We recognize that there are basic needs common to people of all ages, and with varying degrees of illness. It is in this realm that the practical nurse can be prepared in assisting the patient in his return to health.

A. ROSE FRATANTUONO, R.N., *Director, School of Practical Nursing, Our Lady of Fatima Hospital, North Providence, Rhode Island.*

The National Association of Practical Nurse Education and Service has defined the practical nurse as follows:

"A trained practical nurse is a person prepared by an approved educational program to share in the care of the sick, in rehabilitation and in the prevention of illness, always under the direction of a licensed physician and/or a registered professional nurse."

SCHOOLS OF PRACTICAL NURSING

Schools of practical nursing have existed in the United States since 1893. These early schools offered a three-month course to prepare women to give simple nursing care, particularly in the home, or to give needy women something to do that would enable them to earn a living. Growth in the number of recognized schools and of graduate practical nurses was slow until World War II

(Continued on Next Page)

made demands for more nursing personnel. This need has continued, and from about 1950 there has been a very rapid growth in the number of practical nurses and the number of approved programs to prepare them. In a survey conducted by the National League for Nursing, 1968-1969, it was reported that we had 1,252 programs in practical nursing and 34,864 practical nurses during this same period. This study revealed a steady rate of growth in the practical nurse programs.

The practical nurse program may be organized and controlled by a vocational school, a hospital, or some other community agency. In Rhode Island we have two schools of practical nursing: the Rhode Island School of Practical Nursing, which is conducted by the Rhode Island State Department of Education, Division of Vocational Education, and Our Lady of Fatima Hospital School of Practical Nursing. Both schools are approved by the Rhode Island Board of Nurse Registration and Nursing Education, and Our Lady of Fatima Hospital School of Practical Nursing is also accredited by the National League for Nursing. The programs are designed for persons who wish a short-term program in nursing and who will find satisfaction in those nursing functions that are consistent with short term preparation. The program is of 12 months duration. The curriculum is designed to prepare a beginning practitioner for practical nursing and for administering safe nursing care in Medical and Surgical Nursing, in Nursing of Children, and in Maternity Nursing.

Practical nursing is a phase of modern nursing which includes practice within a limited range of nursing situations. The applicable range of variations in nursing situations is of utmost importance. Graduates are prepared to function in two roles:

Under the supervision of a registered nurse or physician she can give care to patients in situations relatively free of scientific complexity, and assist the registered nurse in a close working relationship in the giving of care to patients in a more complex situation.

An applicant who wishes to apply for admission to a school of practical nursing must be a high school graduate or have a twelfth grade equivalency certificate. Students are selected from a wide range, usually 17 to 55, with abilities to complete the program of study and become competent practitioners of practical nursing. His or her personal requirements should be comparable to those required for all individuals who wish to pursue a career in nursing. Satisfactory completion of the program qualifies the graduate to take the state examination for licensure as a practical nurse.

SCOPE OF PRACTICAL NURSING

The new graduate practical nurse is a beginning practitioner who can give competent and safe care within the limits for which she has been prepared. Employing agencies should provide planned programs of in service education for instruction in additional skills within the scope of practical nursing. The National Federation of Licensed Practical Nurses has prepared the "Statement of Functions and Qualifications of the Licensed Practical Nurse." This statement reflects the expanding role of the licensed practical nurse in today's health care system. This statement describes in detail the types of activities which she may perform.

The practical nurse is employed in all types of health facilities, and the employer should be aware of the objectives and the limitations of her preparation. The existence of these limits does not in any way make the practical nurse less essential or less important in nursing. Functioning in her two roles she is one of the most valuable members of the nursing team. Although her functions are limited, she is in no way a "limited person" and has made a valuable contribution to the nursing needs of the community.

The National League for Nursing strongly supports the accredited licensed practical nurse programs which are major sources of today's supply of nurses.



Rhode Island Junior College Associate Degree Nursing Program

Physician Role As Catalyst Seen In Nursing Service Change

By Catherine McGoldrick, R.N.

The various communications media have convinced many that we have a shortage of nurses in this country. Whether or not this is true is debatable. However, one statement heard repeatedly from hospital administrators, directors of nursing service, physicians, and patients is that we do need more people prepared and interested in rendering direct patient care.

Statistics prove that each year increased numbers are entering various types of nursing education programs. The purpose of this paper is to describe one of these programs, to try to answer questions most frequently asked about it and to comment on what employers can expect from and are experiencing with its graduates.

The Associate Degree Nursing Program represents the most recent innovation in nursing education in this country. Its development has been comparable to that of the total junior/community college movement. These colleges have been opening on the average of one a week during the past year. It has been predicted that within ten years almost all students going to college will have their

CATHERINE MCGOLDRICK, R.N., *Dean,*
Division of Nursing, Rhode Island Junior College.

first two years beyond high school in this setting. Although proliferation makes it difficult to obtain an accurate figure, it has been estimated that approximately 450 nursing programs will be admitting students in 1970 and that eventually nursing programs will be located in about fifty per cent of all junior colleges.

EXPERIENCE IN RHODE ISLAND

Experience in Rhode Island reflects the national trend, in which nursing education is being moved from the traditional hospital setting to the institutions within the main stream of general education. Action affecting diploma programs in this state that have resulted in the closing of one hospital school and the phasing out of two others emphasize the role of the junior college in the preparation of nurses now and in the future.

The response on the part of Rhode Island Junior College to the needs of the people in this state can be seen in its rapid expansion of programs in the allied health fields as well as in nursing. September 1969 admissions exceeded the number entering its sister institution, the University of Rhode Island. Related programs include preparation as laboratory assistants, dental assistants, and

(Continued on Next Page)

x-ray technicians; a refresher course for registered nurses; and courses for record room personnel.

The first class of 30 students was admitted to the nursing program in 1966. The total enrollment in 1970 was approximately 255. A minimum of 150 of these were freshmen. Thus, in four years this has become the largest nursing program in the state in terms of numbers of students admitted each year. It has expanded more rapidly than any comparable program in New England, and places about eighth in size in the country.

Because this type of education is new to this state, it is not clearly understood. The question asked most frequently has been, "How do you do in two years what it has traditionally taken hospital schools three years to do?" The answer is quite simple in that we do not believe we offer the same preparation. Basic to this kind of education is careful selection of curriculum content and reduction of repetition in teaching and practice. Graduates of the program are not prepared as head nurses or team leaders, but they are ready at graduation to begin practice as members of the therapeutic team in hospitals or comparable agencies where responsibility involves direct care to patients and families.

STRUCTURE OF THE COURSE

As structured, the program at Rhode Island Junior College is two academic years and one summer session in duration. Courses in general education and nursing are offered concurrently. The general education courses are those that contribute to or are supportive of the development of the individual as a nurse and as a person. They include courses in the physical and biological sciences, social sciences, English, and electives of the student's choice.

Nursing courses are developed as broad areas of instruction. One nursing course is offered each semester and includes appropriate clinical laboratory experience in a variety of health agencies. Content is planned to progress from simple basic skills to more complex nursing problems with each course utilizing and building on previous learning. Concepts pertinent to all aspects of nursing are carried as threads throughout the curriculum. These include communication skills, ethical behavior, diet and drug therapy, instruction in health for self care, positive mental health, and rehabilitation. Principles basic to the practice of nursing are emphasized throughout.

Experience in direct patient care is provided during each nursing course. Students have this one

day per week during the first two semesters and two days per week the last two semesters. Psychiatric nursing is offered in concentration during the summer session. Agencies currently used for these experiences include the following: Hattie I. Chaffee and Health Haven Nursing Homes; Memorial, Kent County, and Rhode Island Hospitals; and the Rhode Island Medical Center. In addition, observational experiences are provided in such related environments as doctor's offices.

LICENSURE

Graduates of the program take the same state board examination to be licensed as registered nurses as do graduates of the hospital based schools and university programs. Because some observer emphasize state board results in their evaluation of this program, it is most significant that despite some failures, the success rate in this state in passing examination on the first writing has been comparable to that of the diploma graduates.

Interest has been expressed concerning admission requirements and the attrition rate. Based on the belief that persons who have average intelligence and motivation can be taught nursing, the admission requirements are the most liberal that have ever been in existence in any school of nursing in this state.

The attrition rate does not have the same meaning as it had in the traditional diploma program. The opportunity in the junior college for students to earn advanced placement by transfer of credits from another program, or college, or by challenge examination, the opportunity for reinstatement following one unsuccessful academic attempt, or the chance to transfer to other programs if they change their occupational goals have all had their influence in the so-called drop-out rate. Nationally, because many junior colleges have an open door policy on admissions, the rate has been as high as 50 per cent. At Rhode Island Junior College the rate between the number admitted and the number graduated has averaged 35 per cent.

There is evidence that the program as structured has appeal to a wide cross-section of our population. The opportunity offered for selection of nursing as a beginning point of employment, a second choice of occupation, or a second chance to achieve a goal is seen in the composition of the class graduated this year.

MAKEUP OF GROUP

The heterogeneous makeup of the group is revealed in the following background information.

(Concluded on Page 53)

Baccalaureate Education In Rhode Island

History And Purposes Of Baccalaureate Education In Nursing Outlined

By Barbara L. Tate, Ed.D.

The current program of baccalaureate education for nursing began in the State of Rhode Island in 1945*. This was some time before the large national growth of baccalaureate education. Following a year of planning the University of Rhode Island admitted its first students in 1945 to a department in Home Economics. From this department the School and later the College of Nursing evolved.

URI COLLEGE OF NURSING

As the College of Nursing at the University reflects on its first twenty-five years of existence, it is only natural that we should look at the whole state of Rhode Island and the place this college program has within the state. For several years the College of Nursing at the University remained the only program in Rhode Island located in an institution of higher education until a private college in Newport, Salve Regina, opened its program. Then in 1965 the Rhode Island Junior

BARBARA L. TATE, Ed.D., *Dean and Professor, College of Nursing, University of Rhode Island.*

*A five year program leading to a bachelor's degree and an R.N. was conducted jointly by Pembroke College at Brown University and the Rhode Island Hospital from 1931 to 1952, when it was discontinued. Ed.

College opened the first associate degree program in the state and now the Rhode Island College will admit its first baccalaureate students in September 1970.

During this twenty-five year period, the bulk of the nurses of the state of Rhode Island have been prepared in five diploma programs, and the bulk of the nursing service in Rhode Island is currently provided by the graduates of these five programs. The graduates of the baccalaureate programs and the associate degree programs have at no time carried a large proportion of the nursing within the state. Until the University opened its master's program in September 1970, there was no graduate education within the state.

During the past few years one of the five diploma programs has closed and two others have indicated their intentions of closing. The remaining two diploma programs can never satisfy the needs for registered nurses within the state. From this point forward the bulk of new nurses entering practice within this state will obviously come from one of the three baccalaureate programs, the junior college program, or perhaps from other new programs as yet not established. What does this mean to the state?

(Continued on Next Page)

POSITION PAPER ON NURSING EDUCATION

The report of the National Commission for the Study of Nursing and Nursing Education has awakened a new interest and concern in many people in the health field as to the future of nursing practice and nursing education. Even in September 1965, when the Position Paper on Nursing Education of the American Nurses' Association was first published, the trend toward nursing education became a fact. In the fall of 1965, there were 198 baccalaureate programs and 174 associate degree programs. Nearly one-third of the programs preparing for R.N. licensure were already in institutions of higher education.

In 1969, just before the Commission announced its recommendation pertaining to nursing education in institutions of higher learning, the number of baccalaureate programs was 254 and associate degree programs 390. Nearly 50 per cent of all programs are now in institutions of higher education. Although the Commission has indicated the desirability of maintaining some schools of nursing that are closely associated with the hospital rather than an already existing college or university, they also indicate that there are approximately 25 diploma programs that could provide excellent programs and they indicate that these programs should obtain collegiate status and offer a degree of one type or the other dependent upon their administration, resources, and facilities.

Although the change in nursing education in Rhode Island has taken place more rapidly than was anticipated several years ago, the change was planned by a state-wide committee on nursing which included representatives of nursing education, the other health professions, and the public. Perhaps the only segment of nursing education that has not followed the planned set-up more quickly than anticipated is that of the advent of new junior college programs of nursing within the state. It is five years since the first one was established, and at the current times there is no indication of when a second one can be established.

TRANSITION IN RHODE ISLAND

At the time of the Surgeon General's report there was no indication of the exact responsibilities to be assumed by graduates of the baccalaureate program or by graduates of the associate degree programs. The report did recommend that approximately 75-80 per cent of each year's new graduates would presumably have a technical education while 20-25 per cent would have a baccalaureate degree. The exact proportion of nurses

with a master's degree for leadership positions was not specifically indicated. The change in nursing education in the state of Rhode Island is virtually complete. It is essential that those responsible for the baccalaureate programs as well as the new master's program at the University of Rhode Island move very strongly in planning for the best use of the few well-prepared nurses that will enter the labor market in the coming years. Generally over the past few years in Rhode Island there has been no increase in the numbers of graduates in spite of considerable increase in the population and the demands for health services. This fact and another of the key problems cited by the Commission, that of making nursing a satisfying life-time career, certainly indicate that we must act vigorously in the field of research and demonstration projects which lead to the following:

- 1) Better articulation of the educational systems so that any health worker with the talent and the motivation can move from one level of the health profession to another and particularly within the nursing care occupations.
- 2) Development and utilization of instructional methods which allow for a larger output of graduates without a proportionate increase in faculty members.
- 3) Cooperative planning with the other health groups and particularly the medical profession, and the very best roles for all health workers to meet the demands for health services.
- 4) Cooperative efforts with the health agencies to develop and demonstrate the best ways of utilizing those prepared in the health field and particularly those prepared in nursing care.
- 5) Development of continuing education programs that will assist all nursing care personnel to keep abreast of the changes as well as providing refresher programs for women returning to nursing practice after a leave of absence.

CAREER PATTERNS

Perhaps the only real new recommendation coming from the Commission at this time is that calling for two career patterns for nursing. I think that for the near future this presents the greatest opportunity for change that has occurred in some time in baccalaureate nursing education. It has long since been recognized that the practice of

medicine is so broad in scope and so demanding of extensive scientific knowledge that it is no longer possible for a doctor to serve successfully every patient with whom he might come in contact. Medicine until recently has patterned its specialties along clinical lines, and nursing has followed a similar practice. However, both medicine and nursing are now facing the need for a whole new sector of patient care — that of health maintenance and disease prevention.

The medical profession has long had a small group of individuals involved in this endeavor, as has nursing. They have usually functioned in the name of public health. In recent years the needs for personnel have become considerably larger than in the initial days of public health medical practice and public health nursing. The physician has normally had four years of college and four years of medical school, following which he serves a minimum of one year of internship. This gives the physician nine years to choose a field of specialization and to establish his own career goals.

The nurse is not in this position. The nurse usually enters a college of nursing immediately from high school and has already made a choice of a two- or four-year preparation for this occupation. If the candidate chooses the two-year program, he (or she) has little or no background for working in a community setting and at least in acute or chronic care setting. If he chooses the his early years needs extensive supervision in the four-year program, he does have an introduction to all types of nursing, but by the end of the four years will normally need to have made his decision as to whether or not he will continue in acute institutional nursing care or whether or not he will practice in a broad community setting. Because of this limit of a maximum of four years in which to make a major decision for a life-time career, it is becoming more and more necessary for the baccalaureate program to provide extensive and thorough background in the natural sciences and the social sciences. As the background courses at the baccalaureate level increase, it is a natural adjustment to decrease the actual clinical practice hours. This does mean that the new graduate of the baccalaureate program is not ready to function as a highly-skilled beginning staff nurse in any setting at the time of his graduation. However, he will have had, or should have had, an excellent background in the natural and social sciences and specific directed experiences in applying his background knowledge for the solution of

patient nursing care problems. Given reasonable supervision and reasonable time for adjustment to the work setting, this baccalaureate graduate should move into a very responsible functioning position within a few months, regardless of whether he enters an acute or chronic care institution or whether he works primarily in the community setting.

FLEXIBILITY OF OPTIONS

One of the reasons that many baccalaureate students have transferred from nursing to other majors within the university setting has been the false understanding that most nursing care consisted of meeting the physical needs of patients day in and day out, with little opportunity for any type of position other than that within the acute hospital setting. If the student nurse thought he preferred working in the community with broad family health problems, he thought he needed to transfer from nursing to a field such as social work or health educator. If we can make it far more clear to these students that there are two career patterns — and really many variations of these two patterns — I feel certain that we could retain many more students than we currently retain through the four year baccalaureate program. Clarifying these roles becomes the task of all members of the health profession. All health personnel should recognize that there are a multitude of opportunities for the graduate nurse, and particularly the baccalaureate graduate, and we should be more concerned that the nurse chooses the career most suited to his or her talents rather than necessarily follow in the direction we feel has the greatest need at the moment.

SUMMARY

It is my firm belief that it is the place of the baccalaureate program to provide its students with as sound as possible a background on which to base nursing practice; to provide adequate selected experiences in nursing so that the student knows the techniques of solving patient care problems in a variety of settings; and finally, to make certain that the students are familiar with the total broad scope of medical and nursing practice within which they can make their decision for a very firm and lasting career in the health field.

REFERENCES

- ¹U.S. Department of Health, Education and Welfare: **Toward quality in nursing — needs aid goals.** Washington, D.C., 1963
- ²National Commission for the Study of Nursing and Nursing Education: Summary report and recommen-

(Concluded on Page 53)

The Professional Association's Role In Nursing Education

*Educational Progress Summarized By
State Nurses' Association Leader*

By Catherine Graziano, R.N.

The professional organization representing the largest number of registered nurses is the American Nurses' Association. Numbering approximately 200,000, it is at present the loudest voice being raised in support of nursing service to all America, and the nursing education of all those preparing to give that service.

Changes are inevitable in any system — either progression or regression become evident with the passage of time. Consequently, A.N.A. has chosen the path of progress — the true professionalization of every nurse registered to give and promote the nursing services required by a growing population.

Where are these forward thrusts? They are now at the grass roots as well as at the higher echelons of the educational process. Baccalaureate, Master's, and Doctoral programs are rising to the challenge presented by a medically oriented public. Better preparation of teachers generally insures the improved preparation of the practitioners; so emphasis begins here.

Society (and we are all society) demands quality performance for the expenditure of its medical dollar. More sophisticated public opinion forces change in the traditional way of doing things. The nursing profession has faced the challenge.

CATHERINE GRAZIANO, R.N., *President,
Rhode Island State Nurses' Association.*

The Position Paper (famous or infamous, depending on your viewpoint) in 1965 clearly stated the responsibility of nursing education to become truly educational — to find its direction to the institutions of higher learning, and to forego the expensive, patient-paid traditional diploma programs. Recognizing the immeasurable contributions of these hospital programs, the decision to phase them out was not made lightly, nor arbitrarily.

Junior College programs (A.S. degree) have been founded and nourished to become a vital force in nursing. Rhode Island can well be proud of its own growing, expanding facility within the Rhode Island Junior College. Taxpayers who support this and other state-sponsored programs may be very proud of the response to a definite need, and the foresight of our nursing leaders has indeed proved most beneficial.

Practical Nurse Programs, too, have accepted the challenge to produce prepared, competent members of the nursing team. Accreditation procedures have been instituted, and schools are currently being visited by the National League for Nursing. One such school in Rhode Island has already met and surpassed the criteria and carries full recognition from the accrediting body. The other program will also be approved in the near future, we are most confident.

The Rhode Island State Nurses' Association can take pride in its constituent status with the American Nurses' Association and the forward thinking

(Concluded on Page 54)

Nurse and Patient

*“The Trained Nurse Has Become One
Of The Great Blessings Of Humanity”*

By William Osler, M.D.

The trained nurse as a factor in life may be regarded from many points of view — philanthropic, social, personal, professional and domestic. To her virtues we have been exceedingly kind — tongues have dropped manna in their description. To her faults — well let us be blind, since this is neither the place nor the time to expose them. I would rather call your attention to a few problems connected with her of interest to us collectively — and individually, too, since who can tell the day of her coming

Is she an added blessing or an added horror in our beginning civilization? Speaking from the point of view of a sick man, I take my stand firmly on the latter view, for several reasons. No man with any self respect cares to be taken off guard, in *multi*, so to speak. Sickness dims the eye, pales the cheek, roughens the chin, and makes a man a scarecrow, not fit to be seen by his wife, to say nothing of a strange woman all in white or blue or gray. Moreover she will take such unwarrantable liberties with a fellow, particularly if she

catches him with fever; *then* her special virtues could be depicted by King Lemuel alone. So far as she is concerned you are again in swathing bands, and in her hands you are, as of yore, a helpless lump of human clay. She will stop at nothing, and between baths and spongings and feeding and temperature-taking you are ready to cry with Job the cry of every sick man — “*Cease then*, and let me alone.” For generations has not this been his immemorial privilege, a privilege with vested rights as a deep-seated animal instinct — to turn his face toward the wall, to sicken in peace, and, if he so wishes, to die undisturbed? All this the trained nurse has, alas! made impossible. And more, too. The tender mother, the loving wife, the devoted sister, the faithful friend, and the old servant who ministered to his wants and carried out the doctor’s instructions so far as were consistent with the sick man’s wishes — all, all are gone, these old familiar faces; and now you reign supreme, and have added to every illness a domestic complication of which our fathers knew nothing. You have upturned an inalienable right in displacing those whom I have just mentioned. You

(Continued on Next Page)

Reprinted from *Aequanimitas*, Philadelphia, P. Blakiston’s Son & Co., 1904, pp. 155-166.

Paper read before Nurses Graduation at John Hopkins Hospital, 1897.

are intruders, innovators, and usurpers, dislocating, as you do, from their tenderest and most loving duties these mothers, wives and sisters. Seriously, you but lightly reckon the pangs which your advent may cause. The handing over to a stranger the care of a life precious beyond all computation may be one of the greatest earthly trials. Not a little of all that is most sacred is sacrificed to your greater skill and methodical ways. In the complicated fabric of modern society both our nursing and our charity appear to be better done second-hand, though at the cost in the one case as in the other of many beatitudes, links of that golden chain, of which the poet sings, let down from heaven to earth.

Except in the warped judgment of the sick man, for which I have the warmest sympathy, but no respect, you are regarded as an added blessing, with, of course, certain limitations. Certainly you have made the practice of medicine easier to the physician; you are more than the equivalent of the old two hourly doses to a fever patient; and as the public grows in intelligence you should save in many instances the entire apothecary's bill. In his chapter on Instinct, in the Origin of the Species, Darwin gives a graphic account of the marvelous care-taking capacity of the little *Formica fusca* — a slave ant. One of these "introduced into a company of her masters who were helpless and actually dying for lack of assistance, instantly set to work, fed and saved the survivors, made some cells, and tended the larvae and put all to rights." *Put all to rights!* How often have I thought of this expression and of this incident when at your word I have seen order and quiet replace chaos and confusion, not alone in the sick-room, but in the household.

As a rule, a messenger of joy and happiness, the trained nurse may become an incarnate tragedy. A protracted illness, an attractive and weak Mrs. Ebb-Smith as nurse, and a weak husband — and all husbands are weak — make fit elements for a domestic tragedy which would be far more common were your principles less fixed.

While thus a source of real terror to a wife, you may become a more enduring misery to a husband. In our hurried progress the weak-nerved sisters have suffered sorely, and that deep mysterious undercurrent of the emotions, which flows along silently in each one of us, is apt to break out in the rapids, eddies and whirls of hysteria or neurasthenia. By a finely measured sympathy and a wise combination of affection with firmness,

you gain the full confidence of one of these unfortunates, and become to her a rock of defense, to which she clings, and without which she feels again adrift. You become essential in her life, a fixture in the family, and at times a dark shadow between husband and wife. As one poor victim expressed it, "She owns my wife body and soul, and, so far as I am concerned, she has become the equivalent of her disease." Sometimes there develops that occult attraction between women, only to be explained by the theory of Aristophanes as to the origin of the race; but usually it grows out of the natural leaning of the weak upon the strong, and in the nurse the wife may find that "stern strength of promise of control" for which in the husband she looked in vain.

To measure finely and nicely your sympathy in these cases is a very delicate operation. The individual temperament controls the situation, and the more mobile of you will have a hard lesson to learn in subduing your emotions. It is essential, however, and never let your outward action demonstrate the native act and figure of your heart. You are lost irrevocably, should you so far give the reins to your feelings as to "open the sacred source of sympathetic tears." Do enter upon your duties with a becoming sense of your frailties. Women can fool men always, women only sometimes, and it may be the lot of any one of you to be such a castaway as the nurse of whom I was told a few weeks ago. The patient was one of those Alphonsine Plessis-like creatures whom everybody had to love, and for whom the primrose path of dalliance had ended in a rigid rest cure. After three weary months she was sent to a quiet place in the mountains with the more sedate of the two nurses who had been with her. Miss Blank had had a good training and a large experience, and was a New England woman of the very best type. Alas! hers the greater fall! An accomplishment of this siren, which had produced serious symptoms, was excessive cigarette smoking, and Dr. ——— had strictly forbidden tobacco. Three weeks later, my informant paid a visit to the secluded resort, and to his dismay found patient and nurse on the verandah enjoying the choicest brand of Egyptian cigarette!

While not the recipient of all the wretched secrets of life, as are the parson and the doctor, you will frequently be in households the miseries of which cannot be hid, all the cupboards of which are open to you, and you become the involuntary

possessor of the most sacred confidences, known perhaps to no other soul. Nowadays that part of the Hippocratic oath which enjoins secrecy as to the things seen and heard among the sick, should be administered to you at graduation.

Printed in your remembrance, written as headlines on the tablets of your chatelaines, I would have two maxims: "I will keep my mouth as it were with a bridle," and "If thou hast heard a word let it die with thee." Taciturnity, a discreet silence, is a virtue little cultivated in these garrulous days when the chatter of the bander-log is everywhere about us, when, as some one has remarked, speech has taken the place of thought. As an inherited trait it is perhaps an infirmity, but the kind to which I refer is an acquired faculty of infinite value. Sir Thomas Browne drew the distinction nicely when he said, "Think not silence the wisdom of fools, but, if rightly timed, the honour of wise men, who have not the infirmity but the virtue of taciturnity," — the talent for silence Carlyle calls it.

Things medical and gruesome have a singular attraction for many people, and in the easy days of convalescence a facile-tongued nurse may be led on to tell of "moving incidents" in ward or theatre, and once untied, that unruly member is not apt to cease wagging with the simple narration of events. To talk of diseases is a sort of Arabian Nights' entertainment to which no discreet nurse will lend her talents.

With the growth of one abominable practice in recent days I am not certain you have anything to do, though I have heard your name mentioned in connection with it. I refer to the habit of openly discussing ailments which should never be mentioned. Doubtless it is in a measure the result of the disgusting publicity in which we live, and to the pernicious habit of allowing the filth of the gutters as purveyed in the newspapers to pollute the stream of our daily lives. This open talk about personal maladies is an atrocious breach of good manners. Not a month ago, I heard two women, both tailor-made, who sat opposite to me in a street-car, compare notes on their infirmities in Fulvian accents audible to everyone. I have heard a young woman at a dinner-table relate experiences which her mother would have blushed to have told to the family physician. Everything nowadays is proclaimed from the house-tops, among them our little bodily woes and worries. This is a sad lapse from the good old practice of our grandfathers, of which George Sand writes,

"People knew how to live and die in those days, and kept their infirmities out of sight. You might have the gout, but you must walk about all the same without making grimaces. It was a point of good breeding to hide one's suffering." We doctors are great sinners in this manner, and among ourselves and with the laity are much too fond of "talking shop."

To another danger I may refer, now that I have waxed bold. With the fullest kind of training you cannot escape from the perils of half-knowledge, of pseudo-science, that most fatal and common of mental states. In your daily work you involuntarily catch the accents and learn the language of science, often without a clear conception of its meaning. I turned incidentally one day to a very fine example of the nurse learned and asked in a humble tone what the surgeon, whom I had failed to meet, had thought of the case, and she promptly replied that "he thought there were features suggestive of an intracanalicular myxoma"; and when I looked anxious and queried, "had she happened to hear if he thought it had an epiblastic or mesoblastic origin?" this daughter of Eve never flinched; "mesoblastic, I believe," was her answer. She would have handed sponges — I mean gauze — with the same *sang froid* at a Waterloo.

It must be very difficult to resist the fascination of a desire to know more, much more, of the deeper depths of the things you see and hear, and often this ignorance must be very tantalizing, but it is more wholesome than an assurance which rests on a thin veneer of knowledge.

A friend, a distinguished surgeon, has written, in the Lady Priestley vein, an essay on "The Fall of the Trained Nurse," which, so far, he has very wisely refrained from publishing, but he has permitted me to make one extract for your delectation. "A fifth common declension is into the bonds of marriage. The facility with which these modern Vestals fall into this commonplace condition is a commentary, shall I not say rather an illustration, of the inconsistency so notorious in the sex. The Association of Superintendents has in hand, I believe, a Collective Investigation dealing with this question, and we shall shortly have accurate figures as to the percentage of lady superintendents, of head-nurses, of graduates and of pupils who have bartered away their heritage for a hoop of gold."

I am almost ashamed to quote this rude paragraph, but I am glad to do so to be able to enter

(Continued on Next Page)

a warm protest against such sentiments. Marriage is the natural end of the trained nurse. So truly as a young man married is a young man marred, is a woman unmarried, in a certain sense, a woman undone. Ideals, a career, ambition, touched though they be with the seal of St. Theresa, all vanish before "the blind bow-boy's butt shaft." Are you to be blamed and scoffed at for so doing? Contrariwise, you are to be praised, with but this caution — which I insert at the special request of Miss Nutting — that you abstain from philandering during your period of training, and, as much as in you lies, spare your fellow-workers, the physicians and surgeons of the staff. The trained nurse is a modern representative, not of the Roman Vestal, but of the female guardian in Plato's republic — a choice selection from the very best women of the community, who know the laws of health, and whose sympathies have been deepened by contact with the best and worst of men. The experiences of hospital and private work, while they may not make her a Martha, enhance her value in many ways as a life-companion, and it is a cause, not for reproach, but for congratulation, that she has not acquired immunity from that most ancient of all diseases — that malady of which Rose of Sharon sang so plaintively, that sickness "to be stayed not with flagons nor comforted with apples."

A luxury, let us say, in her private capacity, in public the trained nurse has become one of the great blessings of humanity, taking a place beside the physician and the priest, and not inferior to either in her mission. Not that her calling here is in any way new. Time out of mind she has made one of a trinity. Kindly heads have always been ready to devise means for allaying suffering; tender hearts, surcharged with the miseries of this "battered caravanserai," have ever been ready to speak to the sufferer of a way of peace, and loving hands have ever ministered to those in sorrow, need and sickness. Nursing is an art to be cultivated, as a profession to be followed, is modern; nursing as a practice originated in the dim past, when some mother among the cave-dwellers cooled the forehead of her sick child with water from the brook, or first yielded to the prompting to leave a well-covered bone and a handful of meal by the side of a wounded man left in the hurried flight before an enemy. As a profession, a vocation, nursing has already reached in this country a high development. Graduates are numerous, the directories are full, and in many places there is over-

crowding, and a serious complaint that even very capable women find it hard to get employment. This will correct itself in time, as the existing conditions adjust the supply and demand.

A majority of the applicants to our schools are women who seek in nursing a vocation in which they can gain a livelihood in a womanly way; but there is another aspect of the question which may now be seriously taken up in this country. There is a gradually accumulating surplus of women who will not or who cannot fulfill the highest duties for which Nature has designed them. I do not know at what age one dare call a woman a spinster. I will put it, perhaps rashly, at twenty-five. Now, at that critical period a woman who has not to work for her living, who is without urgent domestic ties, is very apt to become a dangerous element unless her energies and emotions are diverted in a proper channel. One skilled in hearts can perhaps read in her face the old, old story; or she calls to mind that tender verse of Sappho—

As the sweet-apple blushes on the end of
the bough, the very end of the bough,
which the gatherers overlooked, nay
overlooked not but could not reach.

But left alone, with splendid capacities for good, she is apt to fritter away a precious life in an aimless round of social duties, or in spasmodic efforts at Church work. Such a woman needs a vocation, a calling which will satisfy her heart, and she should be able to find it in nursing without entering a regular school or working in ecclesiastical harness.

An organized nursing guild, similar to the German Deaconesses, could undertake the care of large or small institutions, without the establishment of training schools in the ordinary sense of the term. Such a guild might be entirely secular, with St. James, the Apostle of practical religion, as the patron. It would be of special advantage to smaller hospitals, particularly to those unattached to Medical Schools, and it would obviate the existing anomaly of scores of training schools, in which the pupils cannot get an education in any way commensurate with the importance of the profession. In the period of their training, the members of the Nursing Guild could be transferred from one institution to another until their education was complete. Such an organization would be of inestimable service in connection with District Nursing. The noble work of Theodore Fliedner

(Concluded on Page 52)

1970 Nurse of the Year Award

Rhode Island Hospital Nurse Receives Honor From Medical Society

By Maurice Adelman, M.D.

A year ago, in cooperation with your Association, the Rhode Island Medical Society established the Nurse of the Year Award. Our purpose was two-fold. First, the physicians of Rhode Island, far better than any other persons, are fully aware of the vital role that Nursing plays in our health care system, and we know that without you nurses we could never practice the healing art as effectively as we do; second, we are concerned as is your Association with the necessity of recruiting the youth of our state to enter the Nursing profession. We have worked this year, through our Committee on Nursing, with your officers, and we have reviewed the report of the National Commission for the Study of Nursing and Nursing Education. We hope that through our mutual efforts we may meet with success in encouraging secondary school students to become nurses.

I am sure you would like to know the process whereby we have selected the Nurse of the Year. Each hospital and District Nursing Association in the state was asked to submit to the committee its outstanding candidate for the award. Nominations were limited to registered nurses who have

Presented by Maurice Adelman, M.D., Chairman of Committee on Nursing, Rhode Island Medical Society, at the 5th Annual Convention of the Rhode Island State Nurses' Association, October 15, 1970 at the Colonial Hilton Inn, Cranston, Rhode Island.



MISS LEONA F. FIDRYCH
of Rhode Island Hospital

(Concluded on Page 54)

The Tarnished Image Of American Higher Education

Student Energy Must Be Channeled Into Constructive Involvement And Responsibility

By Rev. Joseph L. Lennon, O.P.

Ten years ago higher education had the universal respect of the American people. But today we find the public outraged by, and fearful of, the college campus. The gap between town and gown has widened because irresponsible elements have used the college to organize and launch from the campus negative attacks on American institutions and officials, on democratic principles and policies.

We entered the 1960's with the academic profession in highest esteem. Its requests were seldom denied; its budget needs grew—and were met substantially and in good spirit.

Thus it was. But not so now. The shining image of American higher education has become tarnished. The public, benefactors, parents of students, and even students themselves are beginning to question and rebel against much that is going on in higher education. Support is not, of course, dying out, even though the stock market slump has put a damper on alumni giving. But the growing dissatisfaction with the way college administrators have dealt with campus unrest portends rough days ahead for college donations. The Old

REV. JOSEPH L. LENNON, O.P., Vice President for Community Affairs, Providence College, Providence, Rhode Island.

Delivered at the Rotary Club Meeting, Providence, Rhode Island, July 28, 1970.

Grad may continue to give, but the size of his contribution will decrease as his faith in Alma Mater wanes. Why give, the alumnus argue, when "the old school" has changed so much that it is no longer what it was, when it no longer stands for the values that held sway in the "good old days," when it seems to have betrayed the very principles it instilled in graduates of former years?

What has happened in ten short years to move the colleges so far away from their former position of public respect and confidence?

Perhaps there are as many explanations for the plight of the colleges as there are observers to it. Each individual will weigh heavily those factors which he, because of bias, training, or life experience, sees of greatest import. The present campus mess did not arise from a single cause. As I see it, several elements had to be present for our campus problems to have exploded with such apparent suddenness.

CONFUSION IN GOALS

First of all, there had to be confusion on the part of administration, faculty, and students concerning the identity, purpose and motivating philosophy of their institution. Although pluralism is an essential ingredient in American society and in its supporting institutions, there is a need for an ethos, philosophy, or theory which can assign meaning, and establish priorities, to the educational activities a college or university conducts. It is out of such a backdrop of philosophy that

the institution establishes its identity, creates its climate of learning, attracts students, and puts its distinctive stamp on its graduates.

One of the glories of American higher education is its diversity. In the past, each institution, while dedicated to the cultivation of the mind, had something unique about it, and the alumni were quite identifiable according to the stamp put on them by Alma Mater. When I was at college, Dean Chandler used to say that you can always tell a P.C. student, because "a Providence man is a gentleman always" (the Cardinal Newman ideal). This is another way of saying that an institution which manifests a prevailing philosophy, whether it be Roman Catholic, denominational, military, business, artistic, or service to agriculture, is likely to be a more effective educational agent than an institution which reflects, as an institution, all points of view. In stating this, I subscribe to the belief that, while a college may reflect a common philosophy in its educational practices, it may still welcome a variety of personal viewpoints on the part of its students and faculty.

HOMOGENIZATION

The growing homogenization of higher education, which was pointed up in a recent study by the Carnegie Commission on Higher Education, may well be a factor in student discontent. Students like to know the score. They want to know what a college stands for, what it is trying to accomplish, how it intends to achieve its aims. If institutions of higher learning are becoming more and more like each other, as the Carnegie Commission study indicates, then students wonder why they should choose *this* college rather than *that* college. For instance, in the past, an identifying characteristic of Catholic colleges was the prominent place assigned in the curriculum to philosophy and theology. This is no longer the case. Yet, I believe that if a college gives the intellectual and moral values it prizes a clear priority, then it will have commitment, and where there is commitment, there is voluntarily accepted discipline—the discipline of shared values which de Tocqueville and Lincoln have taught us to recognize as the healthy core of a free society. On the other hand, if the college does not know where it is going, or what it should be doing, this lack of purpose is communicated to its students. An atmosphere of aimlessness breeds unrest, and the motivated student becomes like the man who got on his horse and "rode off in all directions."

Too many students float through their four years of college.

LEVEL OF EXPECTATION

Again, for campus problems to reach a crisis stage, there had to be a failure, on the part of the college, to set a clear and explicit level of expectation for its students. Does not high performance depend upon great expectations? Expect little from young people and you get little. A college's obligation, it seems to me, is to do something purposeful and constructive for all of the students it admits. The college should make it clear in advance what it is it thinks it can do, and then accept only those students who will likely benefit from what the college has to offer. If the needs of an applicant cannot be met at a particular college, then it is always his privilege to apply to another institution.

This applies also to the area of discipline. Young Americans like to know the rules of the game. Once they are known, students are fairminded enough to adhere to them, if they are in keeping with the institution's philosophy. If the rules are ridiculous, rebellion will result. But every college should have clearly established procedures for mediation, arbitration, and conciliation to arrive at a reasonable settlement of faculty-student-administration disputes. Ordinarily, if those who are bound by regulations have some significant voice in shaping them, the task of enforcing them is somewhat eased.

Colleges have almost stopped trying to control the conduct of their students because they have lost faith in the character building objective of higher education. As one professor said: "I don't give a damn what they do once they're out of my classroom."

MOTIVATED BUT IRRESPONSIBLE

But the seeds of unrest could only have found fertile soil on those campuses where there were highly motivated, hostile, articulate, and irresponsible faculty members. The colleges harbor a small number of kooks who, selfrighteously and with intellectual condescension, proclaim they have the solution to all that is wrong with the world. The unenlightened who do not agree with them are looked upon as being either stupid or immoral. These self-styled savants are often frustrated junior faculty members. Disgruntled and disenchanting with a system in which they are accorded inferior professional status and little or no power in the government of the institution, these young

(Continued on Next Page)

teachers find in student demonstrations a fertile field for acting out their own neurotic needs. They sometimes succeed in paralyzing the college because of the apathy of their preoccupied, timid colleagues. Moreover, they are often successful in bringing the college president to his knees because of the currently accepted peace-at-any-price style of college administration.

CAPTIVE ADMINISTRATORS

The most remarkable campus change in the past decade, revealed by the study of the Carnegie Commission on Higher Education, was the increased faculty and student control over institutional affairs. The current college administrator, his power emasculated by students and faculty, is reduced to using the tactics of appeasement, compromise, and surrender. The president of a college is almost a captive of faculty and students. He dare not say "no." He goes from one crisis to another, congratulating himself if he has been able to escape the violence publicized at other institutions. Although he would like to take a stronger disciplinary stand against student misconduct, the college administrator, because he thinks of himself more as an arbitrator than a leader, is practically impotent in the face of tactics of confrontation and protest used by students and faculty. The students today, then, are upset by the failure of the establishment, on-campus as well as off-campus, to provide the firm leadership necessary to solve the problems that confront them.

SILENT MAJORITY

Hard core radicals, who want to blow up the college or the government, comprise, we are told, only one-half of one per cent of all U.S. college students. Student activists, we are further informed, total less than 15 per cent of the student body on any campus. If these statistics are correct, it is quite evident that a small group of student activists dominate much of the extra-curricular life of most campuses, and have successfully persuaded the larger portion of the student body to sympathize with activist causes and tactics. Unless passive students come alive and take an active part in campus issues, they can expect to have their education interrupted by frequent campus disturbances.

The fact that a very small percentage of students votes in student body elections should concern us deeply. The fact that there is tiny attendance at campus meetings for outside speakers should make us wonder about the massive apathy

of the "silent majority" of college students. Democracy is fragile anywhere—on or off-campus. Even in the best of times, its health requires that the majority participate actively in its processes. When too many students and faculty "drop out," then those extremists on campus, who never could have won in fair competition, find themselves on the stage alone and in charge. The professionally-oriented, hard-working moderate student is beginning to find out that unless he wants to let the more radical students take over, he will have to participate in campus politics. Enlightened self-interest alone dictates his involvement in campus issues.

SOCIAL AND EMOTIONAL IMMATURITY

Perhaps the mentality and character of modern youth has also contributed to the crises on campus. Current research discloses that many of our youth have neither the strength nor the equipment to stand up individually for their convictions. Though better trained intellectually, they are found to be more isolated as individuals and more lonely. Their friendships are shorter in duration and more superficial in nature. David Riesman, author of *The Lonely Crowd*, reports that during the past ten years students average fewer friends each year. Thus they lack the experiences to mature socially and emotionally as rapidly as generations did before.

Today's younger generation may be the most concerned, best educated, and most highly motivated in American history; but it is also the most despondent, the most melancholy, the most totally alienated. Indeed, if we are to believe the studies of activist students, we would have to conclude that the current crop on campus are a grim, tight-lipped bunch; critical of self, but more critical of others; practically humorless, with attempts at wit taking the form of heavy-handed and often vulgar ridicule of the administration, faculty, "square" students and the outside world. How valid is this description? It undoubtedly rings true in some instances but sounds phony in others; for students, like people in general, seem both idealistic and cynical, humanitarian and selfish, kind and cruel.

INTOLERANCE OF COMPLEXITIES

It does seem fairly certain, however, that more youth today show themselves less capable of postponing gratifications, less able to tolerate probabilities and shades of grey, and more demanding of absolutes. Apparently, college faculties have failed to develop in youth an appreciation of, and

tolerance for, complexity. The college student too often looks for the easy answer and the quick result. He is incapable of living with loose ends and unsettled business, and has not acquired the capacity to defer decisions and endure ambiguity. Lacking experience, he finds it hard to tolerate present disorder so that he may reach a higher level of integration and order.

The ability to cope with tension and with polar values has been recognized as the criterion of a free man by social philosophers as widely divergent as de Tocqueville and Buber, and one of the traditional roles of the college has been to aid youth in walking "the narrow ridge." Human beings are always faced with uncertainties which are never comfortable. They can respond by seeking to find some more clearly understood way, or they can develop toughness of character which allows them to live with not knowing how the story will end. Youth must learn to live with the fact that the world is not perfect; that parents are not responsible for the accumulated ills of mankind; that to make an evil world better there is need for educated, trained, disciplined minds, not posturing crybabies who, in defeat, plead for amnesty. The activist must learn that feelings of alienation are normal; then even people over thirty are beset with doubts, have their own inner crises, are familiar with the world's ills; that prudent pursuit of material goods is not wrong, since it is a prerequisite of culture; that the world's population is not made up of two classes, angels and devils; that the problems are intricate, the solutions often defying the best efforts of the wisest men.

PROBLEMS WITH AUTHORITY

It is quite evident that youth today have many problems with authority. How could it be otherwise, when they have had so very little experience with it? Too many parents act with permissiveness not because they have any particular theory of child rearing but rather as a response to uncertainty and fearfulness about their own roles as adults. Excessive permissiveness in the home unfits the young person from subsequent encounters with such less permissible authority figures as school teachers, professors, policemen, and employers.

This much is sure: Youngsters need adults to be models, to respect, to argue with, and to test. They need a point of view. They need adults who believe in themselves and in something. The young can decide what to become, and what not to become, only by observing real adults. They can learn little that is good from observing jello,

whether in the form of parents, deans of students, teachers, or even clergymen.

But how is it today? Too often adults imitate their teenagers. Daughter puts on a mini skirt, mother follows suit. Likewise father talks in teenage jargon to prove he is one of the boys. Both parents learn the Twist and progress to the Watusi.

Adolescence is a time when youngsters should be somewhat separate and on their own, but it is also a time when they need to know that there is strength and understanding in adults. Now, instead—and for the first time in our history—the youngster looks over his shoulder and feels "My God, here they come again."

And outside the family other adult models—teachers, clergymen, college administrators—behave in the same imitative ways; and they are representatives of our society and its institutions. Too many of them prefer peace and popularity to respect. Too many think of the normal expression of authority as a burden, rather than a privilege and duty that should bring personal fulfillment.

EFFECTS OF AFFLUENCE

Affluence has also contributed more than its share to the problems on campus. Undoubtedly, affluence leads to a certain arrogance in youth—an expectation to receive, even though giving little in return. Middle class youngsters generally are given what they want—sometimes even before they know they want it. Parents too often can't think of reasons to deny them. In giving, parents tend to forget it is more satisfying for youngsters to build, to grow, to contribute, and to participate, than simply to be spectators and recipients of the accomplishments of others.

In saying this, I do not mean to imply that life in America should become less abundant or less satisfying than we know it. Every parent wants to give his kids more than he himself had. I do not demean our comforts and our advantages. I love them and enjoy them as everyone does. But we may well consider whether our morale is equal to our blessings.

I remember stopping at the window of a downtown shop once, my attention caught by a sign on display. It asked the question, "If you're so smart, why aren't you rich?" That was one I couldn't answer. But then it dawned on me that I *did* have the answer: the answer was that it was the wrong question. Perhaps this is what the

(Continued on Next Page)

youth of today is trying to tell us: we are asking the wrong questions.

For young people, the goals of the self-centered—power, success, profit-making, status, luxury—are not so much objectives as dangerous will-o'-the-wisps. Youth want a fair share of the so-called good things of life, but even more they desire simply to lead lives that are generous and creatively satisfying. The aim of many rebellious students is to live life itself artistically, doing everything, even dressing, as imaginatively as possible—and therefore enjoyably, both as performer and appreciator.

FOSTERING THE GOOD LIFE

Feeling such a desire, it would be hardly less miraculous were they not to react violently against, not only the socio-economic system which seems to them to frustrate it, but also the educational structure that fails to help them to work out an overall view of reality, or which denies them the training needed to devise a technically sound plan of action for fostering the good life. After all, it is the presence or absence of meaning that makes all the difference. Whether the fruit blooms or withers on the vine, whether the bird sings or falls into solemn silence depends almost wholly on whether life has significance.

There is a saying to the effect that if a man does not know to what port he is sailing, no wind is favorable. If we are to build our youth for the future, and if we are to build our future with our youth, we need, first of all, a set of dependable blueprints. Building is a purposeful activity. No architect builds just for the fun of it. We must tell young people what we are building for—and this is where our problem of building a future for our youth begins. How can an adult generation that is unsure of its basic values pass on to its youth an ability to rearrange its conflicting priorities? Adults must first set their own house in order. The most significant thing about a society is its ruling beliefs and values. The characteristic of our contemporary world, which most confuses our youth, is the total chaos in the rank order of our priorities that prevails in our discussion of, say, education and all its ramifications, or taxation, or the conservation of natural resources, or in the confusion that mars contemporary discussion on the nature of a free society. These are

adult problems to youth, but they are adult responsibilities. Adults make the world in which youth grows up. Adults determine the formative pattern in which youth develops. Every generation of adults gets the type of youth it deserves.

GOLDEN OPPORTUNITY

But campus tensions and campus activism can be golden opportunities for educators. I agree with the official who said: "If there were not tensions on campus there should be a committee established to create some, because a campus without tensions is intellectually moribund." Tensions indicate that students are concerned and want to be involved with problems on campus and off campus. This is a refreshing change to what we see about us. Too many Americans have lost the feeling that what they do has any lasting importance, or any importance at all. That the average American is too much "other directed" has been amply documented. So critics plead for more "inner directed" persons interested in the independent thinking a democracy requires. For the more a person becomes "other directed", the more is he amenable to the eventual control of totalitarian dictatorship. But dangerous as the absence of "inner directed" persons is to a democracy, probably more dangerous is the presence of "non-directed" persons, who do not care whether they are "other" or "inner" directed. To them it makes little difference, because they do not believe, or do not realize, they possess any freedom to choose between being "other" or "inner" directed. The world's problems are too big for their little "me".

That is why seasoned college administrators are not running scared in the midst of campus turmoil. The last thing they want is to put an end to legitimate student activism and campus tensions. Let students shriek "unfair" as long as they suffer an unconscionable neglect by faculty members; as long as poor teaching and irrelevant curricula prevail; as long as there is repression of black, brown, and red people; as long as women are denied equal opportunity; as long as there are unbelievable contrasts between the affluent few and the deprived many; as long as our polluted environment kills people. Problems will not be solved by "keeping students in their place," but by channeling student energy into constructive involvement and responsibility.

(Concluded on Page 51)

Editorial

THE SHORTAGE OF NURSES*

Despite the fact that schools of nursing are training more young women now than ever before, the relative shortage of nursing personnel in the wards of our hospitals becomes increasingly acute. We shall not attempt to analyze this problem on a statistical basis, since physicians attending patients in any of our Rhode Island hospitals and elsewhere, as well as hospital administrators and nursing directors and supervisors, will readily accept this premise.

We have no special pipeline which gives us the wisdom to offer solutions to this difficult and critical nationwide problem, but we do feel that much hogwash has been written on the subject. We are not averse to trying our hand.

It seems to us that there is no shortage of young women in our teeming population who would make good candidates for nursing duties. Why do they not come forward in sufficient numbers to fill our needs: Basically, we feel, the deterrents are (1) inadequate pay scales and (2) the educational requirements.

While hospitals are struggling to keep costs down it is heresy to proclaim that they are paying their nursing personnel inadequately; yet we feel that this is true. Individual hospitals can break out of the community pattern of wages only at their peril, as they are terrified of starting a competitive wage spiral with their neighboring hospitals. Until hospitals are in a position to raise nursing salaries (and we are well aware of the vast demands upon their resources), we feel that the nursing shortage will continue. Only a more attractive living standard will draw girls into training schools and smoke them out of retirement, or woo them away from industry and other competing careers such as public health nursing and the Veterans Administration.

The second deterrent, the problem of nursing education, is complex and controversial. Many years ago the late Doctor Frank Lahey warned that we were creating serious problems by educating our girls away from the bedside. This problem has been accelerated by the drive of nursing educators and accrediting bodies to raise the stand-

ards and levels of nursing education, and by the precedent of military experience during World War II, when nurses were taken away from the bedside and assigned increasingly to administrative and paper-shuffling duties.

One cannot ignore the need for intelligent and educated girls for roles in nursing education and administration and to carry out the highly technical duties required in modern scientific medicine and the up-to-date hospital. But this is not the crying need at the moment. Workers as well as queen bees are needed.

There has been some stimulating thinking in recent years concerning the directions of nursing education. This has had to do with a reevaluation of the 1-2-3-4-5 situation presently characterizing nursing courses. This formula is an abbreviation indicating the various types of training programs ranging from five year collegiate courses to one year practical nurse courses. The five year course (two of hospital training and three of collegiate) leading to both a B.S. and R.N. has been gradually disappearing from the scene. We doubt if any (or any significant number) still survive. This has been largely replaced by the four year collegiate course (two of hospital and two of college), a very satisfactory development.

The three year hospital schools have done an excellent job over the years and are still providing an important segment of the nursing profession. They are dignified by a long tradition and protected by widely current but probably out-dated state licensing laws. There is a very serious question, however, whether they are not as obsolete as are the five year schools. It may well be that the vested interest of existing schools has been a powerful factor in their survival. Is it an appropriate function of hospitals, however, to conduct what are virtually junior colleges? Is this function adequately performed by a majority of existing nursing schools? Does the three-year program deter many adequately endowed young women from pursuing a nursing career? Are these schools drawing upon resources that could better be devoted to training a larger number of candidates at a somewhat lower level? With a two year span, could not the same facilities be used to turn out half again as many candidates?

*Reprinted from the August 1964 issue of this **Journal**. While several of the changes recommended have already been implemented or are in the process, many of the comments remain timely.

It has been seriously suggested that all formal nurse training should be on a collegiate basis consisting of programs at the junior college and senior college levels. These programs would be the present four year program leading to a B.S. and R.N., and a two year program leading to an Associate in Arts (or Science) and an R.N. Coupled with the one year practical nurse program we would end up with a 1-2-4 situation sufficiently flexible for all needs and much more attractive to a variety of candidates because of the shorter years involved. Master degrees and doctoral programs are avail-

able for those girls with greater ambitions and capacities.

The three year programs could continue as at present, but no new ones should be undertaken, nor expansion of the old encouraged. Those with proper affiliations or in a position to establish such affiliations could convert to two year or four year programs or both, as circumstances permitted. Reinforcement by private, state, and federal scholarships would increase their attractiveness. The recent establishment of a state junior college in Rhode Island offers an excellent opportunity to explore this approach.

PAS-MAP - A Golden Opportunity

Rhode Island has many special characteristics. Its small size, dense population, and compactness make it an ideal demonstration area. Unhappily, it has a frustrating faculty for missing golden opportunities. One such opportunity is to assure a leadership role in the use of computerized hospital data on a statewide basis.

Rhode Island is probably unique in that all of its fourteen acute general hospitals subscribe to the services of the Commission on Professional and Hospital Activities of Ann Arbor, Michigan. The commission is a nonprofit research organization sponsored by the American College of Physicians, the American College of Surgeons, the American Hospital Association, and the Southwestern Michigan Hospital Council. It was developed under grants from the W. K. Kellogg Foundation and is supported by income from fees paid by participating hospitals.

It provides three services: the Professional Activity Study (PAS), the Medical Audit Program (MAP), and the quarterly Length of Stay Package.

Rhode Island hospitals subscribe to all of the services. The subscription fee for the three services is forty-six cents (\$.46) per patient discharge. There are currently some 110,000 discharges annually. Thus an expenditure in excess of \$51,000 per year is indicated. Completing the data forms requires the services of at least one record clerk

per hospital. This would amount to not less than \$56,000 for the fourteen general hospitals. These functions, therefore, cost Rhode Island consumers, at a conservative estimate, something like \$110,000 per year. The various hospitals have subscribed to these services for differing periods, but none less than four years. One must conclude, then, that at least \$1/2 million dollars has thus far been expended for this purpose.

The PAS data have had varying usefulness to hospital administrators for statistical purposes. There is increasing use of length-of-stay data by hospital utilization committees. A few hospitals have begun to utilize the material for medical audit. Yet reams and reams of unused computer print-outs are filling up yards and yards of shelf space in the hospitals.

Two misconceptions in the past have contributed to this unsatisfactory situation: First, that computer data would be self-revealing, and second, that medical staff members could become retrieval specialists. Physicians do not have the expertise, interest, training, or time for this type of activity. As a result they have displayed varying degrees of indifference. Some have speculated whether, considering the cost, the whole program should not be dropped.

There are compelling reasons, however, for urging continuation of the services. With the almost certain impending advent of more sophisti-

cated peer review mechanisms, the need for computer services is inevitable. It would show poor foresight and false economy to discard the excellent services now available and then seek another possibly home-grown system that almost certainly would not be as good.

While it may appear to be throwing good money after bad, the answer, we believe, lies in each hospital acquiring or training a full-time lay retrieval specialist. There is no reason why the smaller hospitals could not join in twos or threes to share such an individual. The second step involves forming a Medical Audit Committee of the medical staff in each hospital. The physician members would ask questions, request specific types of information, evaluate material submitted, and make judgments. Examination of the data by the trained

specialist should be a continuing exercise. Evaluations and judgments could be made quickly by the committee at its meetings held at regular intervals. Ultimately, it is hoped that the Medical Audit Committee could replace or simplify the work of some of the other review committees, such as record, tissue, and medical care. It could support through retrospective analysis the activities of the Utilization Review Committee, whose major interest necessarily is current bed occupancy. The organizational set-up would, of course, vary from hospital to hospital, depending on bed capacity and staff preference.

Time is running out. It is high time that the hospitals and physicians of Rhode Island grasp this Golden Opportunity.

Meeting

Place: Meeting of the Program Committee of the National Association for the Advancement of Contemporary Thinking (N.A.A.C.T.).

Time: The present.

* * *

Chairman: We must have a panel on a relevant subject.

Member: How about the drug problem among youth,

Chairman: That is not only relevant, but meaningful.

Another Member: The problem is communication.

Chairman: Can you suggest a speaker who would communicate, not only in a relevant, but a meaningful way?

Member: I would suggest the student health physician at Aquarius College in East Horsecollar.

Chairman: What are his qualifications?

Member: He is a specialist in adolescent medicine.

Chairman: Adolescent medicine?

Member: He is a modified pediatrician who treats overgrown children called adolescents from ages 17 to 22.

Chairman: What would he have to offer?

Member: He is convinced on the basis of frequent examinations of the heart, lungs, and abdomen that the use of marijuana (also called "pot" and "grass") is less harmful than, say spiritus frumenti.

Chairman: Spiritus who?

Member: You know, grain spirits, the fruit

of the vine. He believes that federal laws against the possession and use of marijuana should be abolished. He believes in laissez faire.

Chairman: Lessy who?

Member: You know, laissez faire — freedom of action.

Chairman: That sounds great. How much feed back will we get? That is, presswise.

Member: Aquarius College has a great P.R. Department. There will be daily press releases for a week before and a week after the talk, telling how this outstanding authority believes that marijuana is harmless and should be made legal, and how this prestigious teacher and lecturer to students treats many upper respiratory infections, and does daily histories and physicals on scores of students. He was awarded the Golden Aquarius by the students as the most relevant member of the faculty. Our national standing and our own P.R. Department will assure that it goes on the national wires. This will also help to draw attention away from the almost certain confrontations at our meetings threatened by the National Front for Community Confrontation.

Chairman: OK, Joe. Get the doctor on the phone right now and get a commitment from him:

* * *

Lapse of Time

Chairman: What took so long?

Member: I just called this fellow and he fainted. After being revived, he accepted.

Chairman: Great. Now we are assured of a meaningful and relevant panel.

WEIGHTS AND MEASURES

The ounce is a familiar and traditional word, a comfortable household measure for medicines and recipes, an accepted quantification in Anglo-American civilization. But the precise definition of an ounce is not so easy, confused as it is between measurement of volume and of weight and different usage on the two sides of the Atlantic. The derivation of the word is from the Latin, *uncia*, meaning a twelfth part of. Appropriately, a twelfth part of a Troy pound is a Troy ounce. But Troy pounds are now antiquated measure reserved for weighing gold and silver. The familiar pound is the avoirdupois pound divided, not into 12, but into 16 avoirdupois ounces. And the fluid ounce is 1/16 of an American pint, or 1/20 of a British pint. So an ounce is one of four things: 1/12 of a Troy pound, 1/16 of an avoirdupois pound, 1/16 of an American pint, or 1/20 of a British pint.

What about the relationship between an ounce by weight and an ounce by volume? The British gallon of 160 fluid ounces of water conveniently weighs 16 avoirdupois pounds, while the American gallon of 128 fluid ounces weighs only 8.337 pounds. The British fluid ounce then weighs one ounce, while the American fluid ounce weighs 1.042 avoirdupois ounces. This trouble with ounces illustrates why the Anglo-American peoples can scarcely think beyond pints, quarts, and gallons.

The dram, the gill, the firkin, and the barrel are uncertain quantities to most people. Similarly, other units of Anglo-American measure are confusing and easily forgotten. For example, the British hundredweight weighs 112 pounds, while the American hundredweight weighs 100 pounds. Since the ton in both countries is 20 hundredweight, the British long ton weighs 2,240 pounds, while the American short ton weighs 2,000 pounds. As Oscar Wilde once said: "English is the common language that divides us."

Scientists around the world have long since jettisoned the traditional ways of measurement for the more easily remembered and more easily manipulated metric system. Physicians have generally followed that lead. Now all of Britain is embarked on conversion to the metric system with the momentous change from pounds, shillings, and pence to decimal coinage scheduled for 1971. A concomitant gradual shift to liters, meters, and kilos has been heralded in many British publications. "Think metric" is well advertised in British posters of a bikini-clad model whose measurements are listed 914 mm., 610 mm., and 914 mm., in place of 36", 24", 36". Of course a correction for Americans is required, since the British inch is equal to 25.39998 mm., while the American inch equals 25.40005 mm. But the question is: "What measures should Americans take?"

Guest Editorial: Levodopa And Parkinsonism

In 1817 James Parkinson a general practitioner in Shoreditch, a suburb of London, England, called attention to the disorder which now bears his name. His intention was to interest the morbid anatomists of the day in examining the brains of deceased patients with hope of defining its cause. For the better part of 150 years that have passed since then, paralysis agitans has remained an impenetrable enigma both as to cause and treatment. However, of recent date as a result of biochemical and pharmacologic research, a new approach to the therapy of parkinsonism, its treatment with levodopa, has emerged.

The development of levodopa as a therapeutic agent in parkinsonism will undoubtedly go down as one of the outstanding milestone in medical therapeutics. For anyone witnessing the remark-

able reversal of symptoms which can occur in a disabled parkinsonian patient treated with levodopa, of seeing such a patient return to full functional capacity, can hardly cease to marvel at this therapeutic triumph. At a time when funding for medical research is being restricted and criticism is being leveled at the scientific community for lack of relevance and delayed applicability of their work it may be well to look at the "levodopa story." For here basic and clinical scientists from various disciplines have worked in close association fully to utilize their investigations in bringing forth this new treatment. As is often the case the applicability of basic research is unpredictable. In investigating the mechanism of action of reserpine, an antihypertensive and psychotherapeutic agent, Carlsson¹ found that in mice it was

capable of depleting brain catecholamines, among which was dopamine, and that the effect could be antagonized by levodopa. Soon after this it was discovered that dopamine occurs in high concentration in human basal ganglia structures, a fact previously established in lower animals. Since reserpine is capable of inducing a parkinson-like state, interest centered on this untoward reaction rather than the primary effects of the drug. Birkmayer and Hornykiewicz² pursued this lead and were able to demonstrate a similar depletion of dopamine in postmortem brain tissue obtained from patients dying of Parkinson's disease. Initial attempts to replenish this defect with small intravenous or oral doses of dopa, the immediate precursor of dopamine, met with limited success.^{2, 3} Had it not been for the utilization of large oral doses, levodopa may well have been discarded. That it was not is due to the efforts of Cotzias⁴ who first demonstrated the sustained beneficial effects of large oral doses of dopa in parkinsonism.

The report by Mones, Elizan, and Siegel on page 2309 of this issue of the JOURNAL* confirms and extends the experience of previous investigators of clinical efficacy of levopoda.^{5, 6} It leaves no doubt that at the present time levodopa is the most efficacious agent available for the treatment of parkinsonism. Appropriately used, as many as 75 per cent of patients derive significant degrees of relief of symptoms. However, it is as yet unknown whether it alters the basic disease process. Nor is information available as yet as to the safety of long-term administration. Certainly a number of side reactions have already been documented which necessitate that care and caution be exercised in its use. Levodopa is a potent therapeutic agent with ubiquitous action in many organs and warrants careful handling. Further, the demands for its availability have been so intense that it has been moved rather rapidly from the status of an investigative drug to one available for general use. Physicians should be on the alert for encountering reactions not as yet described.

Despite the outstanding results with levodopa,

it is not the complete answer to the treatment of parkinsonism. Leaving aside schedules necessary in its use, it cannot be administered to all patients, and the side-effects which are induced prevent some from realizing its full benefits. The need exists for a more efficient manner of restoring the dopamine deficit in the brain of parkinsonian patients, one in which it is done selectively without involving the many extracerebral structures which utilize this catecholamine. Biochemical information regarding the metabolism of these large dopa doses and the exact manner in which they produce their effects are now underway and should bring answers to these questions.⁷ Hopefully, the resources for continuing this effort will be forthcoming and the trend to decrease support of biomedical research, evident in many quarters, reversed. M. D. Y.

REFERENCES

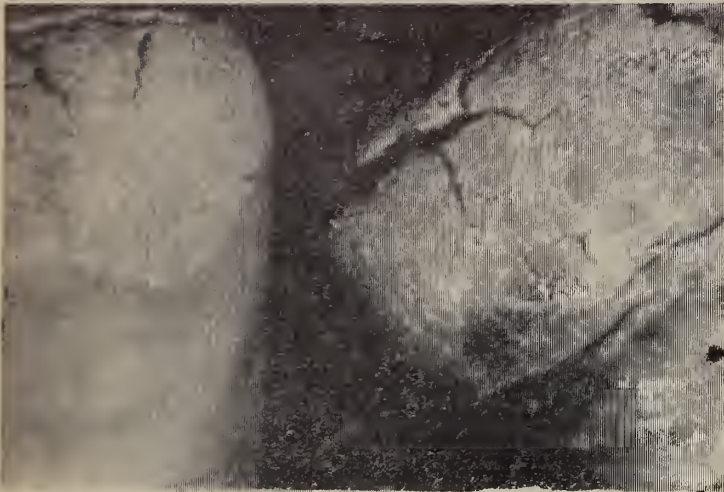
- ¹CARLSSON A: The occurrence, distribution and physiological role of catecholamines in the nervous system. *Pharmacol. Rev.* 11:490, 1959.
- ²BIRKMAYER W., HORNYKIEWICZ O: Weitere experimentelle untersuchungen uber L-DOPA beim Parkinson-Syndrome und Reserpin-Parkinsonismus. *Arch. Psychiat.* 206:367, 1964.
- ³BARBEAU A, SOURKES TL, and MURPHY GF: Les catecholamines dans la maladie de Parkinson, in: Ajuriaguerra, J., Ed.: *Monoamines et Systeme Nerveux Centrale*, Paris, Masson et Cie, 1962, p. 247.
- ⁴COTZIAS GC, VAN WOERT MH and SCHIFFER LM: Aromatic amino acids and modification of parkinsonism. *New England J. Med.* 276:374, 1967.
- ⁵YAHN MD, et al.: Treatment of parkinsonism with levodopa. *Arch. Neurol. and Psychiat.* 21:343, Oct 1969.
- ⁶McDOWELL F, et al.: Treatment of Parkinson's syndrome with 1 dihydroxyphenylalanine (levodopa). *Ann. Int. Med.* 72:29, Jan 1970.
- ⁷WURTMAN RJ, et al.: 1 dihydroxyphenylalanine: Effect on S-adenosylmethionine in brain. *Science.* 169:395, Jul 1970.

*Reprinted from the September 15, 1970 issue of the New York State Journal of Medicine, with the permission of the publishers and the author, Melvin D. Yahr, M.D., Professor of Neurology, Director—Parkinson Research Center, College of Physicians and Surgeons, Columbia University, New York, New York.

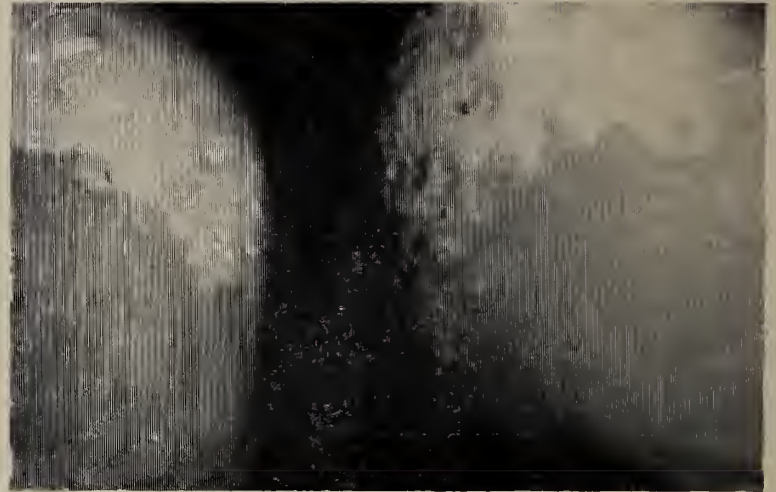


DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



At left, A chronic thickening of the skin of the heels with Grand Canyon-like fissures, in a 65 year old woman.



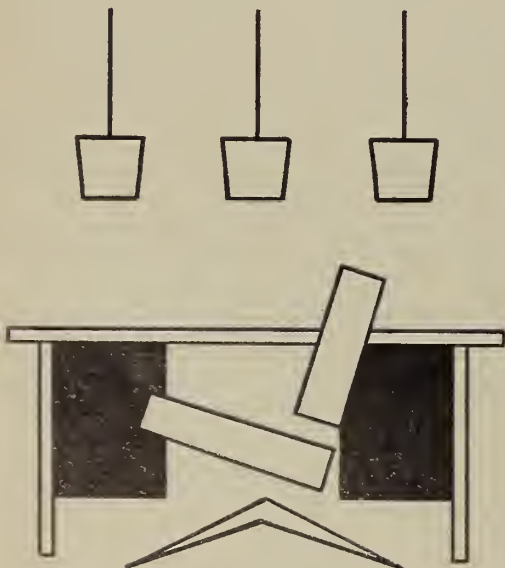
At right, An acute or subacute thickening of the skin of the heels, with a soft, white, soggy skin due to maceration from excess of perspiration.

Answer on Page 54.

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) GASpee 1-5228

Edalogy (ETHNIC MEDICINE)

Coronary Heart Disease in Hawaii: Dietary Intake, Depot Fat, "Stress," Smoking, and Energy Balance in Hawaiian and Japanese Men—

Dietary intake has been studied in 42 Hawaiian and 68 Japanese men who had recovered from acute myocardial infarction, and in 84 Hawaiian and 136 Japanese age-matched control subjects. The principal dietary differences that might give rise to the high-risk factors observed in the Hawaiians, thereby accounting for the higher coronary heart disease mortality in Hawaiians are: a history of sporadic heavy calorie intake, either from total nutrients or, on occasion, from alcohol; a greater day-to-day variation in calorie intake (modified feast-or-famine type of eating pattern); higher saturated fat and total fat intakes, which, if pathogenetic, appear to operate through other than a hypercholesterolemic effect.

. . . Bassett, D. R., et al.: Amer. J. Clin. Nutri. 22:1483, Nov. 1969



RHODE ISLAND MEDICAL JOURNAL

AMA HOUSE OF DELEGATES

(Continued From Page 11)

well exceeding the rate of general population growth, these young doctors are not being motivated to enter into direct patient care in the areas of greatest need. If we wish to hold on to our current supplies of active practitioners and to increase them in a rational fashion there are certain things that we should do, and a number of things which we assuredly should not do.

- 1—In the existing climate of the United States efforts to regiment, conscript, or apply economic sanctions to the medical profession are destined to make matters worse rather than better. They have the effect of driving even more physicians from active practice into research, teaching, administrative medicine, more narrow specialization or premature retirement.
- 2—Promises on the part of government that practicing physicians will deliver even more health service to beneficiaries than they are now able to produce under stress conditions force still more physicians to seek refuge from the pressures.
- 3—The practicing physician is confronted with increasing costs of living and of doing business. In a generally uncontrolled economy measures which would freeze the income levels of physicians, eliminating their ability to adjust to the economic environment are discriminatory and to lead to still further departures from active practice.
- 4—The individual physician has limited opportunity or capacity to respond to overall societal demands. These responses are best made by physicians collectively, acting in concert through their professional associations. It is in the best interests of the nation that professional organizations be aided and abetted in their cooperative efforts. To denigrate them and to give them adverse tax treatment reduced their capacities and their resource for constructive input.
- 5—It has been proposed in several legislative bills that bonus dollars will motivate physicians to establish practices in rural and urban shortage areas. The fact is that large numbers of physicians who have been providing service in those areas leave lucrative practices for less rewarding circumstances in which the offsets are such things as personal and family security, improved educa-

tional facilities, or a lessened pressure of patient demand.

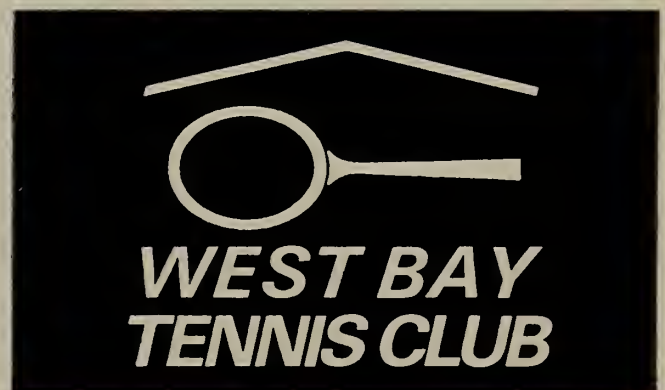
- 6—Prepaid comprehensive group practice has been "discovered" as a potential answer to most of the delivery problems. Rechristened "Health Maintenance Organizations", these arrangements for practice are offered as a panacea without recognition of the fact that such groups have been encountering serious problems of their own, that many patients do not wish to enroll in such plans, and that many physicians have no interest in practicing in them. The many variations of this approach deserve support as competitive mechanisms with a chance to prove such superiorities as they may develop in respect to quality, efficiency and economy, but to attempt to force all physicians into a rigid pattern of salaried group practice could be the most destructive move made by government.
- 7—Plans which would base the entire delivery system of medical service upon "primary physicians" with responsibility for channelling patients and regulating payments to consultants, specialists and the like betray

(Continued on Next Page)

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

OPEN TO ALL
PLAYING TIME STILL AVAILABLE



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

or write Box 387

Warwick, R. I.

a lack of understanding as to how medicine is practiced.

- 8—The willingness of physicians to participate in and to be subject to peer review in respect to the quality and quantity of their services and the charges made therefor are encouraging. This should be supported, not discounted. The prospect of evaluation by non-medical reviewers, or medical reviewers hired by nonmedical agencies is a strong deterrent to cooperation.

In summary, to keep physicians in active practice, rather than to disperse them, government should abandon emphasis on prepaid comprehensive group practice although it may still support it. It should uphold the principle that a physician should be expected to charge his usual fees to all patients and should depend on a strengthened system of peer review to guarantee that such usual fees will conform with customary fees and be kept within the ranges of what can be defined as "reasonable." Mathematical formulae for freezes and arbitrary percentiles should be abandoned. It should probably be accepted that highly trained physicians cannot be attracted into practice in rural areas or in many slum areas, and alternative mechanisms for the provision of adequate medical service should be developed.

Considerations in respect to the second priority (increased productivity):

- 1—There is, in general, little opportunity to increase the productivity of the average practicing physician by simple extensions of his working hours. Actually current enthusiasm for group practice formulae seem to be retrogressive inasmuch as it is represented to the physician who is currently working 60-70 hours per week that under group practice arrangements he may reduce this to 50 or less hours per week. Scattered figures may be cited to support the idea that 100 physicians in solo practice actually provide service to more patients per week than do 100 physicians in group practice of any type.
- 2—The multiple experimental programs of Medex, Duke University, The American Urological Association, and scores of others to develop support to the practicing physician deserve subsidy and assistance. At the same time serious attention must be paid to the medical practice acts of the several states, to factors of professional liability, insurance coverage, and the like.

- 3—Restrictive provisions in such programs as Medicare and Medicaid which make it economically unfeasible for physicians to delegate to others — especially to interns, residents and office assistants — the provision of appropriate services should be eliminated or readjusted.

- 4—Government has taken an unproductive and adverse position in respect to those physicians who have appeared to earn "too much" money from Federal and State programs. Instead of the antagonistic approach of questioning the financial "take" by such persons focus should be on requesting "peer review" of the quality of care offered by these mass producers. It may be good.

- 5—Many physicians are dissuaded from, or become disenchanted with, efforts to provide medical service for Federal and State program beneficiaries because of relatively low compensation, excessive paper work, and an exposure to adverse publicity because of payments received. This should be corrected. Physicians willing to devote themselves to this type of work in volume should be praised rather than denigrated for their efforts.

Consideration in respect to the third priority (augmentation of physician numbers):

- 1—Support to the educational roles of medical schools should be clearly separated from support to medical research so that the latter is not used as a subterfuge for the building of a medical school faculty, or the underwriting of medical school operations.
- 2—As much attention should be devoted to keeping in clinical practice of medicine those physicians who we have as to the training of more physicians.
- 3—A positive program of public relations dedicated to making the clinical practice of medicine attractive to oncoming generations of young Americans would be more productive than a campaign to picture physicians as entrepreneurs requiring regimentation and control.
- 4—Serious attention should be given to the problem of professional liability insurance and the jeopardy in which the practicing physician finds himself today. It is no small matter that the new physician finds that he must pay from two to ten thousand dollars

(Concluded on Page 51)

AMA HOUSE OF DELEGATES

(Continued From Page 11)

well exceeding the rate of general population growth, these young doctors are not being motivated to enter into direct patient care in the areas of greatest need. If we wish to hold on to our current supplies of active practitioners and to increase them in a rational fashion there are certain things that we should do, and a number of things which we assuredly should not do.

1—In the existing climate of the United States efforts to regiment, conscript, or apply economic sanctions to the medical profession are destined to make matters worse rather than better. They have the effect of driving even more physicians from active practice into research, teaching, administrative medicine, more narrow specialization or premature retirement.

2—Promises on the part of government that practicing physicians will deliver even more health service to beneficiaries than they are now able to produce under stress conditions force still more physicians to seek refuge from the pressures.

3—The practicing physician is confronted with increasing costs of living and of doing business. In a generally uncontrolled economy measures which would freeze the income levels of physicians, eliminating their ability to adjust to the economic environment are discriminatory and to lead to still further departures from active practice.

4—The individual physician has limited opportunity or capacity to respond to overall societal demands. These responses are best made by physicians collectively, acting in concert through their professional associations. It is in the best interests of the nation that professional organizations be aided and abetted in their cooperative efforts. To denigrate them and to give them adverse tax treatment reduced their capacities and their resource for constructive input.

5—It has been proposed in several legislative bills that bonus dollars will motivate physicians to establish practices in rural and urban shortage areas. The fact is that large numbers of physicians who have been providing service in those areas leave lucrative practices for less rewarding circumstances in which the offsets are such things as personal and family security, improved educa-

tional facilities, or a lessened pressure of patient demand.

6—Prepaid comprehensive group practice has been “discovered” as a potential answer to most of the delivery problems. Rechristened “Health Maintenance Organizations”, these arrangements for practice are offered as a panacea without recognition of the fact that such groups have been encountering serious problems of their own, that many patients do not wish to enroll in such plans, and that many physicians have no interest in practicing in them. The many variations of this approach deserve support as competitive mechanisms with a chance to prove such superiorities as they may develop in respect to quality, efficiency and economy, but to attempt to force all physicians into a rigid pattern of salaried group practice could be the most destructive move made by government.

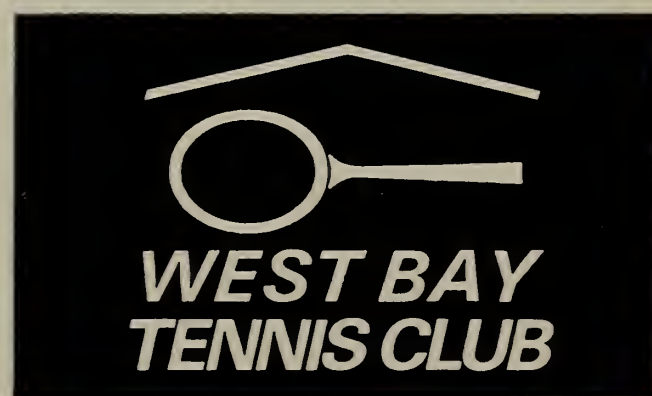
7—Plans which would base the entire delivery system of medical service upon “primary physicians” with responsibility for channelling patients and regulating payments to consultants, specialists and the like betray

(Continued on Next Page)

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

**OPEN TO ALL
PLAYING TIME STILL AVAILABLE**



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

or write Box 387

Warwick, R. I.

a lack of understanding as to how medicine is practiced.

- 8—The willingness of physicians to participate in and to be subject to peer review in respect to the quality and quantity of their services and the charges made therefor are encouraging. This should be supported, not discounted. The prospect of evaluation by non-medical reviewers, or medical reviewers hired by nonmedical agencies is a strong deterrent to cooperation.

In summary, to keep physicians in active practice, rather than to disperse them, government should abandon emphasis on prepaid comprehensive group practice although it may still support it. It should uphold the principle that a physician should be expected to charge his usual fees to all patients and should depend on a strengthened system of peer review to guarantee that such usual fees will conform with customary fees and be kept within the ranges of what can be defined as "reasonable." Mathematical formulae for freezes and arbitrary percentiles should be abandoned. It should probably be accepted that highly trained physicians cannot be attracted into practice in rural areas or in many slum areas, and alternative mechanisms for the provision of adequate medical service should be developed.

Considerations in respect to the second priority (increased productivity):

- 1—There is, in general, little opportunity to increase the productivity of the average practicing physician by simple extensions of his working hours. Actually current enthusiasm for group practice formulae seem to be retrogressive inasmuch as it is represented to the physician who is currently working 60-70 hours per week that under group practice arrangements he may reduce this to 50 or less hours per week. Scattered figures may be cited to support the idea that 100 physicians in solo practice actually provide service to more patients per week than do 100 physicians in group practice of any type.
- 2—The multiple experimental programs of Medex, Duke University, The American Urological Association, and scores of others to develop support to the practicing physician deserve subsidy and assistance. At the same time serious attention must be paid to the medical practice acts of the several states, to factors of professional liability, insurance coverage, and the like.

- 3—Restrictive provisions in such programs as Medicare and Medicaid which make it economically unfeasible for physicians to delegate to others — especially to interns, residents and office assistants — the provision of appropriate services should be eliminated or readjusted.

- 4—Government has taken an unproductive and adverse position in respect to those physicians who have appeared to earn "too much" money from Federal and State programs. Instead of the antagonistic approach of questioning the financial "take" by such persons focus should be on requesting "peer review" of the quality of care offered by these mass producers. It may be good.

- 5—Many physicians are dissuaded from, or become disenchanted with, efforts to provide medical service for Federal and State program beneficiaries because of relatively low compensation, excessive paper work, and an exposure to adverse publicity because of payments received. This should be corrected. Physicians willing to devote themselves to this type of work in volume should be praised rather than denigrated for their efforts.

Consideration in respect to the third priority (augmentation of physician numbers):

- 1—Support to the educational roles of medical schools should be clearly separated from support to medical research so that the latter is not used as a subterfuge for the building of a medical school faculty, or the underwriting of medical school operations.
- 2—As much attention should be devoted to keeping in clinical practice of medicine those physicians who we have as to the training of more physicians.
- 3—A positive program of public relations dedicated to making the clinical practice of medicine attractive to oncoming generations of young Americans would be more productive than a campaign to picture physicians as entrepreneurs requiring regimentation and control.
- 4—Serious attention should be given to the problem of professional liability insurance and the jeopardy in which the practicing physician finds himself today. It is no small matter that the new physician finds that he must pay from two to ten thousand dollars

(Concluded on Page 51)

AMA HOUSE OF DELEGATES

(Concluded From Page 50)

per year in malpractice insurance premiums before he feels safe to treat his first patient. It is equally important to recognize that many active practitioners are being forced from practice by the inability to purchase at any reasonable figure adequate liability insurance. The answer does not lie in finding new "carriers" for the insurance. It lies in legal reforms governing liability.

Considerations in respect to the fourth priority (conservator of public expenditures :

- 1—"Peer Review" is the governing concept which requires support. To dilute it with lip service to consumer representation is not helpful. The medical profession needs to be supported in the outstanding progress it has made in the past decade in the perfection of peer review techniques.
- 2—Indoctrination in peer review should be looked upon as a proper role of National, State and County Medical Societies for incorporation into medical school curricula and hospital intern and residency training programs.
- 3—Techniques of education for the practicing physician in the relationship between hospitalization, physician orders and prescribing practices and the expenditures mandated for patients or those who pay their bills should be advanced.
- 4—Considerable attention should be given to the thought that when a physician is salaried, or otherwise divorced from the fee-for-service method of compensation, he is insulated from a specific interest in how his services or his authorizations for service have impact upon the economics of medical care.

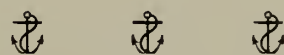


TARNISHED IMAGE OF AMERICAN HIGHER EDUCATION

(Concluded from Page 42)

Today, America faces a crisis of commitment. We need citizens who care, who are concerned, who relate what they do to the common welfare. A "let-George-do-it" attitude is fatal to a free society. I, for one, do not like to think that democ-

racy provides a congenial climate for the "uncommitted." When the words "to hell with it" become the motto of too many citizens, our country is in tough shape. That is why student activism holds high hopes for the future of our country. Man has always needed something bigger than himself to believe in, belong to, or work for. Religious people realize this, and Communists have been wise enough to capitalize on this tendency of human nature to sacrifice for a cause. People who are morally neutral are also morally sterile, and our youth are very conscious of this fact. Christ said the lukewarm deserve to be vomited out. Remember the ignominious spot to which Dante committed the neutrals — those whom both heaven and hell disdained? Contemptuously, the Italian poet placed them just outside the gate, in the ante-chamber of his Inferno. Hell itself does not want them. Our young people say: "Deliver me from this, O Lord." They want to give themselves to a cause. It is up to us to show them the best causes to which they can commit themselves.



AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

NURSE AND PATIENT

(Concluded From Page 36)

should be repeated at an early day in this country. The Kaiserswerth Deaconesses have shown the world the way. I doubt if we have progressed in secularism far enough successfully to establish such guilds apart from church organizations. The Religion of Humanity is thin stuff for women, whose souls ask for something more substantial upon which to feed.

There is no higher mission in this life than nursing God's poor. In so doing a woman may not reach the ideals of her soul; she may fall far short of the ideals of her head, but she will go far to satiate those longings of the heart from which no woman can escape. Romola, the student, helping her blind father, and full of the pride of learning, we admire; Romola, the devotee, carrying in her withered heart woman's heaviest disappointment, we pity; Romola, the nurse, doing noble deeds amid the pestilence, rescuing those who were ready to perish, we love.

On the stepping-stones of our dead selves we rise to higher things, and in the inner life the serene heights are reached only when we die unto those selfish habits and feelings which absorb so much of our lives. To each one of us at some time, I suppose, has come the blessed impulse to break away from all such ties and follow cherished ideals. Too often it is but a flash of youth, which darkens down with the growing years. Though the dream may never be realized, the impulse will not have been wholly in vain if it enables us to look with sympathy upon the more successful efforts of others. In Institutions the corroding effect of routine can be withstood only by maintaining high ideals of work; but these become the sounding brass and tinkling cymbals without corresponding sound practice. In some of us the ceaseless panorama of suffering tends to dull that fine edge of sympathy with which we started. A great corporation cannot have a very fervent charity; the very conditions of its existence limit the exercise. Against this benumbing influence, we physicians and nurses, the immediate agents of the Trust, have but one enduring corrective — the practice towards patients of the Golden Rule of Humanity as announced by Confucius: "What you do not like when done to yourself, do not do to others," — so familiar to us in its positive form as the great Christian counsel of perfection, in which alone are embraced both the law and the prophets.



(Concluded From Page 15)

links mentioned but has never studied the problem as a system and must now apply the principles of systems analysis to the treatment of trauma. This approach, he said, will tell us where to concentrate our efforts and even will make us aware of when the law of diminishing returns comes into play so that counter-productive efforts can be eliminated.

Doctor Keggi obviously has a tremendous amount of energy, ability, and for the time being, the money and certainly will make great contributions to the field of trauma.

* * *

There was general discussion from the floor of the subject.

ADJOURNMENT

The meeting was adjourned at 9:55 p.m.

Respectfully submitted:

Joseph E. Caruolo, M.D.

Secretary

Collation was served.

Attendance 39



PROFESSIONAL ASSOCIATION'S ROLE

(Concluded From Page 32)

and planning of its Statewide Community Planning Committee for Nursing Education in Rhode Island, composed of leaders from the Rhode Island educational scene. We are deeply appreciative of the untiring efforts of our members, colleagues, professional associates, and friends, who have supported us, given us encouragement and understanding of our continuous efforts to become a truly autonomous profession, willing and able to meet the nursing needs of all people, wherever they may be.

We hope such efforts will be maintained.

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOPKINS 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

R. I. JUNIOR COLLEGE DEGREE PROGRAM

(Concluded From Page 28)

They range in age from 17 to 50 years. There were 10 men and 54 women. Approximately 50 per cent came directly from high school. Ten had previously been enrolled in nursing programs, eight held licenses as practical nurses, and two shared ownership in nursing homes. Five had attended Rhode Island Junior College to prepare for enrollment in this program. One each had graduated from Bryant College and the School of Design. Among those exemplifying varied experience were an inhalation therapist, a religious brother, a retired policeman, and a mother and daughter pair. Five students in the post high school age group had had only high school equivalency diplomas when they entered the program.

To answer questions related to employment and performance of the graduates a follow-up study has been conducted for each class approximately one year after completion of the program. This consists of questionnaires to individuals and to their employers. The response has been excellent. Fifty-seven of the sixty-one graduates studied thus far have been employed in hospitals in the state ranging in size from under 50 beds to over 600 beds as well as in extended care and nursing home facilities. Fifty-nine of the sixty-four who have just graduated have indicated their intention of working in comparable agencies within the state.

There is overwhelming evidence that the objectives of the program are being met. The greatest strength in the performance of these individuals is reported to be their interest and ability to give individualized direct patient care; it is reported that they know their limitations, but are curious and actively seek new experiences to broaden their scope of practice.

Weaknesses are identified as their need for experience to develop the ability to manage the care of large numbers of patients at one time, to perform as treatment and medication nurses for large numbers of patients, and to assume charge responsibility on all shifts.

PERFORMANCE OF GRADUATES

In evaluating the performance of these graduates in comparison with those of diploma and baccalaureate programs, employers have in general indicated inability to differentiate between them and diploma graduates beginning variously at time of employment and up to six months. Experience with graduates of the baccalaureate program has

been too limited in the agencies reporting for any significant comparative statement to be made. All respondents indicated a desire to have more of these graduates referred to them for employment.

It appears that the person who is interested in and able to give good intelligent nursing care is the one concerned administrators, nursing service personnel, and doctors have said they need. The Associate Degree program provides the opportunity to prepare large numbers of individuals with these qualities.

There is recognition on the part of many that there is a need for change in nursing service organization. This would involve a shift from the present emphasis on the management and administrative aspects of nursing to a revival of a respected status for those involved in direct patient care. There is evidence that some desirable adjustments are being made, but it is generally accepted that they are slow and often lack imagination.

While the responsibility for innovative change rests with the leaders in nursing, the physician has a stake in the process. His role can be that of instigator, catalyst, or in the very least knowledgeable supporter of sound change.

BACCALAUREATE EDUCATION IN RHODE ISLAND

(Concluded From Page 31)

dations. *Amer J Nurs* 70:279-294, Feb 70

³American Nurses' Association Committee on Education: American Nurses' Association's first position paper on education for nursing. *Amer J Nurs* 65:106-111, Dec 65

NECROLOGY

(Concluded from Page 19)

versity Medical School in 1926. He served his internship at St. Vincent's Hospital, Bellevue Hospital and the Foundling Hospital, all in New York City.

He was a member of the Providence Medical Association, and the Rhode Island Medical Society.

▲ ▲ ▲
ARTHUR H. VAUGHN, M.D.

Arthur H. Vaughn, M.D., of East Providence, died September 4, 1970 at the age of 61 years.

A native of Providence, he was graduated from Brown University in 1931.

Doctor Vaughn was a member of the Providence Medical Association and the Rhode Island Medical Society.

NURSE OF THE YEAR AWARD

(Concluded From Page 37)

been out of nursing school for a minimum of ten years. This year we had fourteen outstanding nominees. You can readily appreciate the task that confronted the committee in making a decision. The field was then narrowed to four.

Each of the finalists was interviewed, their excellent records made the committee's task of selecting an individual a very difficult one.

The Nurse of the Year for 1970 is
MISS LEONA F. FIDRYCH
of Rhode Island Hospital

Miss Fidrych has been at Rhode Island Hospital since she entered the School of Nursing with the Class of September 1943, except for a leave of absence to get her Bachelor's Degree in Science from Boston College.

Now a Nurse Leader on the seventh floor, Miss Fidrych has had a wide range of experience and responsibilities since her appointment as staff nurse after her graduation.

During the years much of her time has been spent in teaching in such areas as pediatric nursing, and the practical nurse program. For several years she directed the in service program for all categories of nursing personnel.

We congratulate you, Miss Fidrych, and I take great pleasure in presenting to you this Revere silver bowl suitably engraved to note that you are the Nurse of the Year for 1970.



WASHINGTON SCENE

(Concluded From Page 14)

"The question now is whether we should divert revenues needed for income maintenance, nutrition, the environment, housing and other health-related efforts, and concentrate them all on creating the federal system of health financing proposed by S. 4323. To do so would assume the failure of the measures currently proposed to correct defects in the present mixed public-private health system.

"In short, we (the Administration) have made substantive recommendations for improving the organization and delivery of services, increasing the efficiency of the health care industry, and for

stimulating necessary reorganization and redistribution, through financing mechanisms. We are very much aware of the urgent need for solution of many problems in the financing and delivery of care, and have committed ourselves to an insurance program to provide protection to low income families with children.

"However, we have serious reservations about the desirability of embarking on a program like S. 4323, that will protect not only the unprotected but those with substantial coverage, and that will radically restructure the health financing and health service industry without having tested the instruments of change."



DERMAQUIZ ANSWER

(See Page 48)

At left, **Keratoderma climatericum.**

At right, **Hyperhydrosis.**



\$100,000

ESTATE **\$233⁰⁰**
FOR ONLY At age 30!

This plan is one of the lowest net-cost life insurance plans in America. Rates at other ages are equally phenomenal.

A level term policy written in minimums of \$100,000 (and no maximums), this plan is designed for the man who needs a larger amount of life insurance at the lowest possible cost.

The plan is written for ages 20 through 65, is renewable to age 70 and may be converted to a permanent plan prior to age 65 without a physical examination.

SBL

Security Benefit Life Insurance Company

700 Harrison, Topeka, Kansas 66603

Financial Security Corporation
Cumberland Professional Building
2180 Mendon Road
Cumberland, Rhode Island 02864
726-2371 726-2370

Please send additional information about your remarkable low-cost insurance plan.

Name

Address

City

State

Zip

RHODE island MEDICAL JOURNAL

| | |
|--|----|
| PRESSURES ON THE AMERICAN PHYSICIAN Bertram H. Buxton, Jr., M.D. | 77 |
| ALCOHOLISM — A REVIEW AND OVERVIEW OF THE PROBLEM Charles N. Hoyt, M.D. | 79 |
| THE RUBINSTEIN-TAYBI SYNDROME REPORT OF FIVE CASES Venetia B. Georas, M.D.; J. Brian May, M.D.; Paul H. LaMarche, M.D. | 84 |
| Progress Notes: THE AUSTRALIA ANTIGEN AND VIRAL HEPATITIS Robert V. Lewis, M.D. | 89 |
| Masters in Medicine: ARCHILLE DE GIOVANNI (1837-1916); EDOARDO BASSINI (1844-1924) Francesco Ronchese, M.D. | 91 |
| Progress Notes: MECHANISM OF THE ACTION OF INSULIN Steven H. Baron, A.B. | 93 |
| EDITORIALS | 96 |
| BOOK REVIEW | 69 |
| DISTRICT MEDICAL SOCIETY MEETINGS | 59 |
| DELEGATE'S REPORT ON THE SECOND NATIONAL CONFERENCE OF STATE MEDICAL ASSOCIA- TION REPRESENTATION ON CONTINUING MEDICAL EDUCATION | 65 |
| PERIPATETICS | 64 |
| THROUGH THE MICROSCOPE | 64 |
| THE WASHINGTON SCENE | 69 |

COVER:**The Military Surgeon and His Assistant**

Woodcut, printed by Nicolas Medelmann in Nurnberg, c. 1530 "I am known everywhere for my medicine for wounds and my noble salves taken from the Feldtbuch (Book of military surgery) and which give proof of their effectiveness. Using them, I have made numerous soldiers hale and hearty again, though they had wounds deep into their bones. As soon as the battle was half over, I stayed up until all the soldiers who had been wounded by firearms were bandaged by me—no matter how serious their injuries—so that no misfortune befell them, and none of them died for want of treatment or comfort; and all this, whether or not they had silver or gold, and I did it for the honor of our flag."

BIBLIOTHEQUE DES ARTS DECORATIVES, PARIS

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



Robert V. Lewis, M.D., Chairman

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

John A. Dillon, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year. Second-Class postage at Providence, Rhode Island. Copyright, 1970.

District Medical Society Meetings

WOONSOCKET DISTRICT MEDICAL SOCIETY

The annual meeting of the Woonsocket District Medical Society was held on Tuesday, December 15th, in the meeting room of the Woonsocket Hospital. The meeting was called to order at 8:30 p.m. by Wilfrid V. Ethier, M.D., President. There were approximately thirty members in attendance by the end of the meeting.

The minutes of the last meeting were accepted as read.

The Society was informed of a letter that had been received from Mr. Duarte, Executive Director of the Woonsocket Chapter of S.P.C.A., which requested a representative from the Society to serve on the Executive Board of the Family Planning Clinics for Woonsocket. President Ethier had appointed Dr. Francesco Cannistra to this position on September 23, 1970, where he is now serving.

Dr. Ethier called for any unfinished business and any new business, but there was none. A report from our delegates to the Rhode Island Medical Society was requested but none of them were present to give a report. It is known that they have been attending the meetings in Providence regularly, as reported in the Rhode Island Medical Journal. Our Councillor was also absent.

The Nominating Committee was called upon for its slate of officers for the coming year. The Committee consisted of Drs. Elphege A. Beaudreault, Edward B. Medoff and Thomas J. Lalor. They presented their candidates, and President Ethier called for any counter nominations from the floor. There were none, and a motion was made and seconded that nominations be closed and the Secretary was directed to cast a ballot for the officers as presented, and they were duly elected.

The officers are: President, Wilfrid V. Ethier, M.D.; Vice-President, Robert L. Farrelly, M.D.; Secretary, Alton P. Thomas, M.D.; Treasurer, Juan P. Mallari, M.D.

Delegates to the Rhode Island Medical Society, Leonard Staudinger, M.D., Francis L. Scarpaci, M.D., and J. Gerald Lamoureux, M.D.

Councillor to the Rhode Island Medical Society, Harry Levine, M.D.

Censors, Arthur C. Gaudreau, M.D., Philip J. Morrison, M.D., Thomas J. Lalor, M.D.

Dr. Wilfrid V. Ethier thanked the Society for the honor of his re-election to the presidency, and proceeded by introducing the speaker for the evening, who was Dr. Richard P. Sexton, President of the Rhode Island Medical Society.

Doctor Sexton had been asked to give a speech on the benefits derived from membership in the Rhode Island Medical Society, since many members of our local Society were unfamiliar with the actions of our organization at the state level.

He explained that most of the work of the Medical Society was carried on by members of the various committees of the R. I. Medical Society, and which were concerned with all aspects of medical care and medical economics in the state of Rhode Island. He described the work of sixteen committees, among which were the committees for Public Laws, Health Planning Council, Hospital-Physician Relations, Highway Safety, and Environmental Pollution. He praised the work of these committees and said that they worked hard and long, both for the medical profession and for the well being of each citizen of Rhode Island. Their efforts are often unthanked, and indeed often even unknown, but would be sorely missed if not done.

Doctor Sexton then introduced Mr. Edward J. Lynch, Assistant Executive Secretary of the Rhode Island Medical Society. Mr. Lynch began by praising the outstanding work of President Wilfrid V. Ethier on the Disaster Committee. He next outlined the type of work he was especially concerned with, which was keeping track of the various laws that are proposed each year by our Rhode Island General Assembly that are concerned with medical care. Several hundred bills are introduced each year that pertain to the practice of medicine or the health care of our citizens. Each one must be followed, and must be commented on by the Society, and often must be assisted or fought all along the line. Recently, he was following a bill into a Senate Committee at 3:30 a.m. that was not disposed of until 5:30 a.m. Then he was able to go home.

(Continued on Page 62)

When irritable colon feels like this



The blowfish, a small species of fish, reacts to stress or fright by puffing itself up with air. After about a dozen noisy gulps the belly is inflated and hard. When replaced in the water the air is quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED[®]** provides more complete relief:

☐ belladonna alkaloids — for the hyperactive bowel ☐ simethicone — for accompanying distension and pain due to gas ☐ phenobarbital — for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or

belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of **ATLAS CHEMICAL INDUSTRIES, INC.**

(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

KINESED[®]

antispasmodic/sedative/antiflatulent

WOONSOCKET MEDICAL SOCIETY

(Continued From Page 59)

The meeting adjourned at 10 p.m. and refreshments were served.

Respectfully submitted:

Alton P. Thomas, M.D.
Secretary

PROVIDENCE MEDICAL ASSOCIATION

The 124th annual meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library in Providence on Monday, January 4, 1971. The meeting was called to order by the President, Dr. Bertram H. Buxton, Jr., at 8:30 p.m.

Doctor Buxton announced that there would not be a reading of the minutes of the November meeting, as the report of that meeting would be published in the Rhode Island Medical Journal.

ANNUAL REPORT OF THE SECRETARY

Dr. Joseph E. Caruolo, Secretary, read his annual report which concluded with a listing of members deceased during 1970.

Doctor Buxton called to the attention of the members the untimely and unfortunate death of Dr. Charles Potter who was shot to death in the parking lot at Lying-In Hospital in December, and he called for a moment of silent prayer in memory of all the members who had died in 1970.

A motion was made, seconded and voted that the annual report of the Secretary be approved and placed on record.

ANNUAL REPORT OF THE TREASURER

Dr. John B. Lawlor, Treasurer, read his annual report, and answered questions relative to the necessity of using the accumulated reserve fund of the Medical Bureau to meet rising costs in 1970. He noted that the Bureau and Association funds are maintained separately.

A motion was made, seconded and voted that the annual report of the Treasurer be approved and placed on record.

AWARD OF MEMBERSHIP CERTIFICATES

Doctor Buxton awarded certificates to members elected at the November meeting of the Association.

PRESIDENTIAL ADDRESS

Doctor Buxton delivered his presidential address, copy of which is made part of the official minutes of this meeting.

Upon completion of his address the membership gave him enthusiastic applause for his excellent presentation.

REPORT OF THE EXECUTIVE COMMITTEE

Doctor Caruolo, Secretary, reported as follows for the Executive Committee:

At a recent meeting the Executive Committee reviewed a report on the Neighborhood Health Centers submitted by the Chairman of the Association's Special Health Programs Committee.

The financial report of the Treasurer for 1970 was reviewed, subject to final audit by Ward Fisher and Company in 1971.

The Executive Committee discussed the matter of scientific meetings of the Association, and took under advisement a proposal that three meetings be held annually, one in the Fall, the annual meeting in January, and one in the Spring, with the possibility that the Fall and Spring meetings be held jointly with the Providence Surgical Society and the R. I. Society of Internists, respectively.

The Executive Committee submits two recommendations:

1. That the annual dues for active members be continued at the same level as that of last year, \$30, and for Associate members, \$5.
2. That Dr. Roberto V. Castaneda be elected to active membership.

Action: A motion was made, seconded and voted that the recommendations by the Executive Committee be adopted.

ELECTION OF OFFICERS FOR 1971

The Secretary reported that, in accordance with the bylaws, the Executive Committee had submitted a slate of officers and delegates for 1971, and no counter nominations had been received. He then read the slate of nominees, copy of which is made part of the minutes of this meeting.

Action: A motion was made, seconded and voted that the slate of nominees, as presented, be elected to serve the Association in 1971.

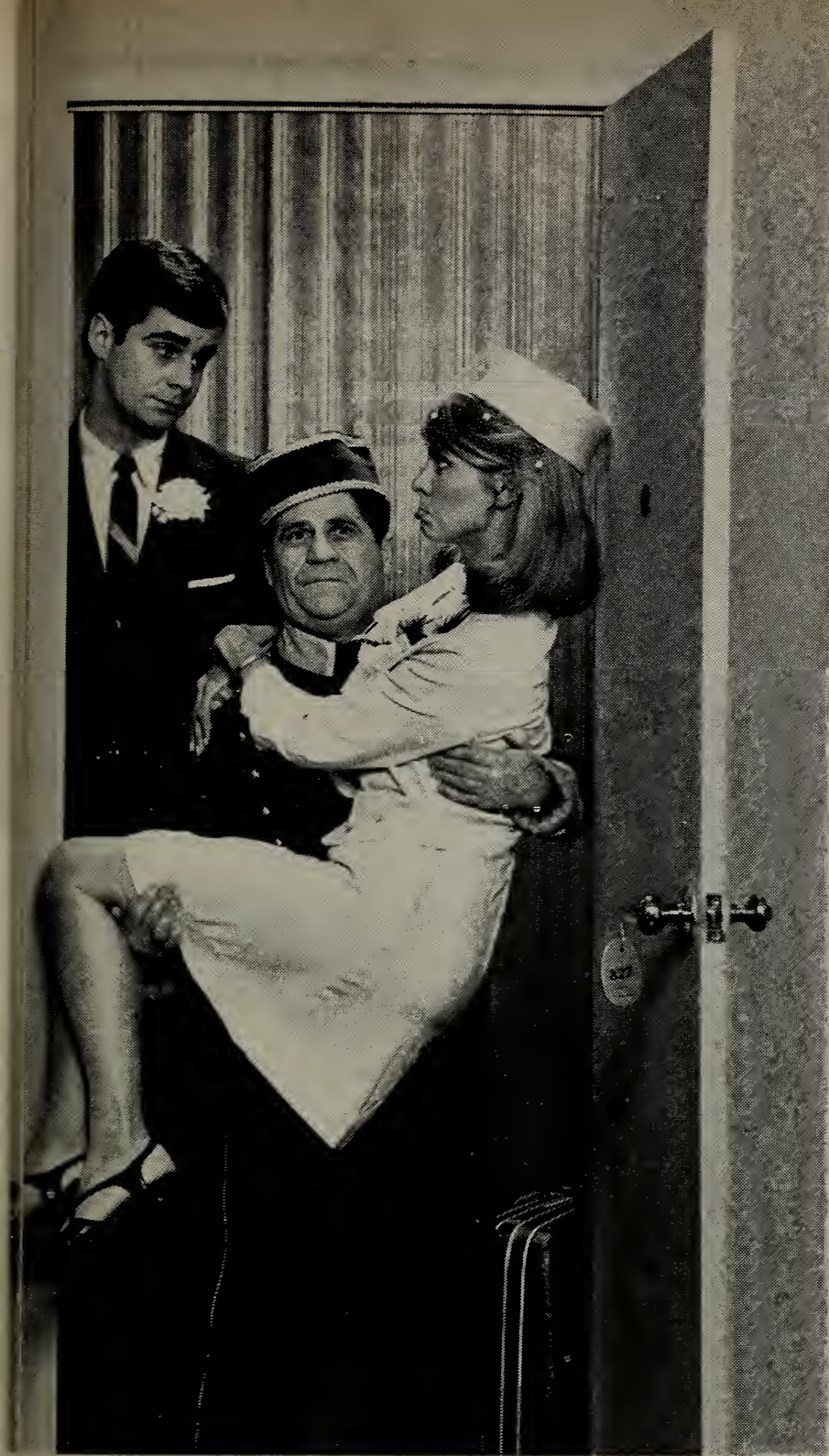
Doctor Buxton named Drs. Abraham Horvitz and Nathan Chaset as a committee to escort the new President, Dr. David Freedman, to the platform.

Doctor Freedman expressed his appreciation for the honor accorded him, and he asked for the continued support of all the members during the coming year. He then commended Doctor Buxton for his outstanding leadership, and he presented to him, for the Association, an engraved gavel.

SCIENTIFIC PROGRAM

Doctor Buxton introduced Dr. Charles J. Mac-

(Continued on Page 111)



Picture of low back pain

Parafon Forte tablets help to relieve pain,
restore mobility... stop pain-spasm feedback

Here is why. PARAFON FORTE provides:

Non-salicylate analgesic equal to aspirin for relief of pain,^{1,2} yet unlikely to cause the gastric irritation^{2,3} or increased bleeding time⁴ associated with aspirin therapy.

and a skeletal muscle relaxant shown in extensive clinical studies to be useful in a variety of low back disorders^{5,7} but which is not an antihistamine or tranquilizer derivative and is unlikely to produce a tranquilizing or sedative effect.⁸

Prescribe PARAFON FORTE for effective spasmolysis and analgesia in acute sprains, strains and myalgias of the lower back, including acute exacerbations of chronic conditions. Your patients will appreciate the restored comfort and freedom of movement it usually provides.

McNEIL

McNEIL LABORATORIES, INC., FT. WASHINGTON, PA. 19034



treated with Parafon Forte® TABLETS

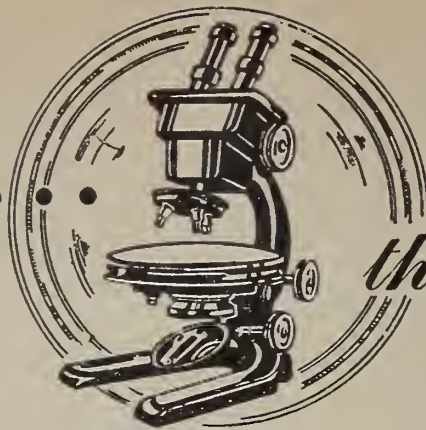
Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

Contraindications: Sensitivity to either component. **Warnings:** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. **Precautions:** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. **Adverse Reactions:** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. **Usual Adult Dosage:** Two tablets q.i.d. **Supplied:** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: *Fed. Proc.* 14:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: *The Pharmacological Basis of Therapeutics*, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: *Gastroint. Endosc.* 14:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: *New Engl. J. Med.* 282:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: *Industr. Med. Surg.* 21:372, 1962. 6. Forster, S., et al.: *Amer. J. Orthop.* 2:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: *Clin. Pharmacol. Ther.* 5:871, 1964.

*U.S. PATENT NO. 2,895,877

THROUGH .



the Microscope

MedCom, Inc. announces the availability of a new project in continuing medical education . . . Depression provided as a service to the medical profession by Lakeside Laboratories, Inc.

MedCom, Inc., a physician and creative team has introduced learning systems now incorporated into the curricula of 70 medical schools.

This new production on depression is a 3-part total learning system prepared for family practitioners, surgeons, internists, obstetricians, gynecologists, teaching psychiatrists and other physician groups.

The learning system is composed of:

1. Full color documentary film — A 30-minute major new medical film that explores this difficult subject with up to date information

from world wide sources.

2. A comprehensive monograph — A definitive 67-page document of permanent reference value, written by outstanding guest editors.
3. A self evaluation section — Provides essential questions with correct answers, so the physician can test himself for his new knowledge of depression.

This total learning system covers causes, symptoms and treatment of depression and is available at no charge to county society meetings, conventions, hospital staff programs, resident and intern medical programs, journal clubs and other groups of interested physicians.

To arrange for use of the continuing medical education materials contact Lakeside Laboratories, Inc., Milwaukee, Wisconsin 53201.

PMA ELECTS OFFICERS

New officers elected by the Providence Medical Association at its annual meeting on January 4 are:

President:

David Freedman, M.D.

Vice President:

Joseph E. Caruolo, M.D.

Secretary:

Thomas F. Head, M.D.

Treasurer:

John B. Lawlor, M.D.

Councillor

(2 year term)

Bertram H. Buxton, Jr., M.D.

Trustee of R. I. Medical Library

(1 year term)

Alfred L. Potter, M.D.

Executive Committee

(3 year terms)

Constantine S. Georas, M.D.

Robert P. Sarni, M.D.

Abraham Horvitz, M.D.

Donald P. Fitzpatrick, M.D.

PERIPATETICS

By ROBERT V. LEWIS, M.D.

The Rhode Island Hospital Medical Staff has elected the following officers for 1971: THOMAS PERRY, JR., President; FRANK MERLINO, President-elect; LOUIS A. LEONE, Vice President; and THOMAS C. McOSKER, Treasurer. BANICE FEINBERG and HENRY C. McDUFF, JR. were named to two year terms on the Executive Committee.

The following appointments have been made: Active Staff—RICHARD B. TURNER, JEAN ASHBA, Department of Medicine; LOUIS R. MAIELLO, Department of Radiology; HENRY L. PACHE, Department of Rehabilitation Medicine; ARTHUR D. DAILY, Department of Dermatology; UPENDRA C. SHAH, Department of Pathology; ROBERTO V. CASTANEDA, Department of Pediatrics; ROBERT W. HOPKINS, Department of Surgery. Courtesy Staff—Y. JACOB SCHINAZI, Department of Ophthalmology; JERZY L. JACEWICZ, Department of Otolaryngology.

Complete Prescribing Information:

Each Larobec tablet contains:
Thiamine mononitrate (vitamin B₁) 15 mg
Riboflavin (vitamin B₂) 15 mg
Niacinamide100 mg
Calcium pantothenate 20 mg
Cyanocobalamin (vitamin B₁₂) ... 5 mcg
Folic acid 0.5 mg
Ascorbic acid (vitamin C)500 mg

Description: For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin B₆) which has been reported^{1,2} to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.

Indications: Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.

Warning: Administration of vitamin B₆ may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B₁₂.

Dosage and Administration: One or two tablets daily, as indicated by clinical need.

How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.

References:

- 1. Duvoisin, R. C., et al.: *Trans. Amer. Neurol. Assoc.*, 94: 81, 1969.
- 2. Cotzias, G. C.: *J.A.M.A.*, 210:1255, 1969.

high-potency
nutritional support for
the levodopa patient

LarobecTM



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

DELEGATE'S REPORT ON THE SECOND NATIONAL CONFERENCE OF STATE MEDICAL ASSOCIATION REPRESENTATIVES ON CONTINUING MEDICAL EDUCATION

At this meeting, which was held in Chicago from October 13th-15th, 1970 I attended as a delegate from the Committee on Continuing Medical Education of the Rhode Island Medical Society. There were approximately 100 people representing individual hospitals, universities, state medical societies and other medical organizations.

The format of the conference was a series of short lectures at first outlining problems, then dealing with methods and illustrative examples of innovative methods of continuing medical education such as the MIST Program in Alabama and the clinical traineeship program in Maryland. These lectures were supplemented by workshops-discussion groups: The subjects of these workshops were 1. Motivation, 2. Evaluation, 3. Organization and methods, 4. Financing, 5. The role of the State Medical Association in Continuing Medical Education. I attended numbers 1, 2 and 5. A program of events is attended; complete transcripts of each talk and a summary of the workshop-discussion groups has already been handed in to the Committee.

Highlights of the conference, in my opinion, were the talk on developing a teaching faculty at community hospitals by Dr. Michael of Jacksonville; this was a very practical talk on methods by which a community hospital could develop a trained faculty and a teaching program from among its own members. The workshops tended to blend into one another but the opportunity to talk to the delegate from the Oregon State Society about the philosophy and methods used in their recent stand that evidence of continuing medical education must be given for renewal of membership in the State Society, California is developing a similar program as are other states that were not represented at this conference.

One of the ideas arrived at at my workshop on the role of the state medical society was that the state medical society is the logical organization to promote continuing medical education; the AMA itself is too large and nebulous, sometimes on a local level there is not the "critical mass" of talent necessary to spark such a program. The State Medical Society need not supplant the efforts of

(Concluded on Page 110)

Guide his hand to quality and economy

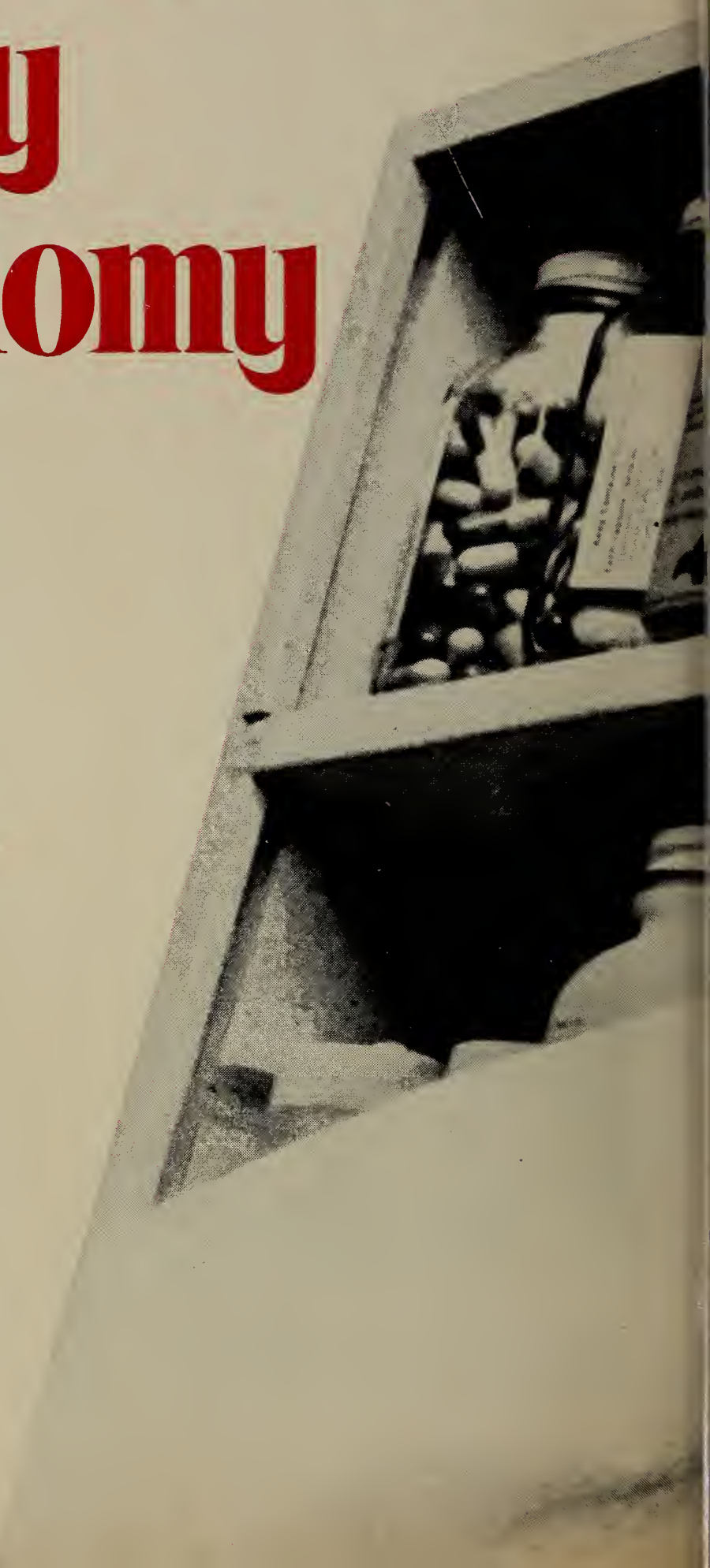
Specify

Deltasone[®] 5 mg.
(prednisone, Upjohn)

an economical
prednisone
that's made
a name for itself

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001



The Washington Scene

A Summary Report Prepared By The Washington Office Of The American Medical Association



The American Medical Association challenged charges of widespread tax cheating by physicians and renewed its offer to cooperate with the government in cracking down on dishonest doctors.

In letters to Sen. Russell B. Long (D., La.), chairman of the Senate Finance Committee, Walter C. Bornemeier, M.D., president of the AMA, answered the tax cheating charges and Ernest B. Howard, M.D., executive vice president of the AMA, renewed the offer of cooperation. But Howard also said that mandatory reporting of unassigned fees by insurance agencies would be an ineffective and unfair way to try to uncover doctors cheating on their income taxes on payments for their services under medicare and medicaid.

The tax-cheating charges grew out of testimony given by Meade Whitaker, who then was tax legislative counsel for the Treasury Department, at a hearing of the Senate Finance Committee during its considerations of changes in the medicare and medicaid programs. He said that many providers of services under the two health care programs might have "substantial deficiencies" in their income tax returns.

In a letter to Long and Sen. Wallace F. Bennett (R., Utah), a ranking minority member of the finance committee, Dr. Bornemeier said that the charges had been widely distorted in the press and these reports do the medical profession a serious injustice.

Whitaker testified that from an original list of 11,000 who received payments of \$25,000 or more for services rendered under medicare and medicaid in 1968, 4,000 returns warranted a detailed audit by the IRS.

With preliminary audits completed on 3,000 of the 4,000 returns, there were indications that 1,500 of these showed "substantial deficiencies," the Treasury reported. "Substantial deficiencies" later were defined as being underpayments of more than \$100.

Dr. Bornemeier said that this testimony was being widely interpreted to mean either that one-

third of the medical profession was cheating (4,000 of 11,000 cases to be audited) or that one-half of the profession was cheating (1,500 alleged offenders from 3,000 actual audits).

"Assuming the worst — that 1,500 doctors out of 111,000 are guilty of income tax irregularities — the correct proportion would be between 13 and 14 per cent rather than 33 or 50 per cent," Dr. Bornemeier said.

The AMA president called on the Treasury Department to be specific in their charges since the interpretation by the press growing out of their testimony reflected on the profession as a whole.

"As of now," he continued, "there seem to be 1,500 cases where substantial deficiencies may

(Continued on Next Page)

Book Review

PROCEEDINGS OF THE CENTENNIAL SYMPOSIUM, MANHATTAN EYE, EAR, AND THROAT HOSPITAL. VOLUME TWO, OTOLARYNGOLOGY. Edited by William F. Robbett. The C. V. Mosby Company, Saint Louis, 1969 \$27.50

This was an excellent symposium on otological and related surgery. It should especially interest the otological surgeon, but also make valuable reading for all who are interested in the ramifications of the specialty.

Subjects covered in depth and detail are stapedectomy, tympanoplasty, and the correction of facial nerve paralysis. There is also a discussion of diseases of the labyrinth amenable to surgical attack.

Procedures such as Vidian Neurectomy, as well as plastic and reconstructive surgery of the ear and nose, are well covered.

Diseases of the larynx are presented together with the necessary surgery for their relief. The subject is covered in detail.

Reading time: two hours.

FRANCIS B. SARGENT, M.D.



exist. I think we should know what proportion of these cases represents cause simply for further examination and what proportion represents cases that may realistically be expected to end up with the fraud division of the IRS.

"I think we should know what proportion of the serious cases involve physicians. I suspect the figures given include osteopaths, dentists, pharmacists, and optometrists and others eligible to receive medicare-medicaid payments."

Dr. Bornemeier told Long that his request for documentation of these cases was not a defense for the dishonest physician or anyone else who attempts to falsify an income tax return.

"We are on record," the Chicago physician said, "as requesting examples of wrongdoing by doctors receiving payments under government health programs so that we may take action of our own."

Dr. Howard said that "the dishonest or incompetent physician hurts us just as much as he harms his government."

Dr. Howard said that a recent statement by Long that the AMA had been "completely forthright and honorable, and sought to shield no one" is "exactly our position."

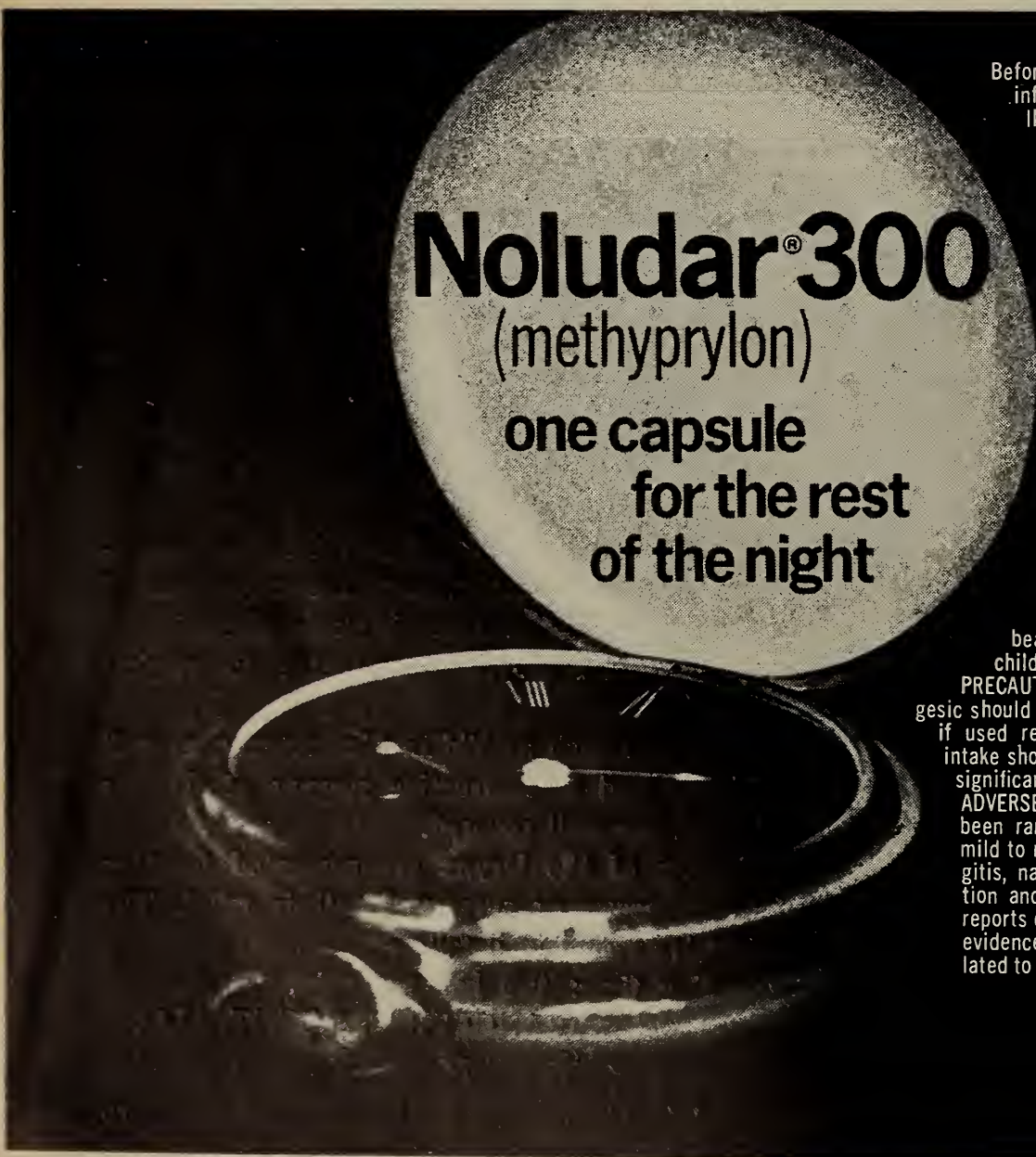
The AMA official also noted that Long at a re-

cent hearing of the finance committee had referred correctly to previous requests by the AMA that it be given examples of suspected chicanery by physicians in government health programs "so that we might take our own action."

As for mandatory reporting of unassigned medical payments — those given to the patient rather than to the physician — Dr. Howard said such a requirement "would not provide the Internal Revenue Service with helpful and meaningful data." He urged rejection of such an amendment proposed by the Treasury Department. A joint House-Senate conference committee rejected it last year in considering tax reform legislation.

The Treasury Department proposed that Blue Cross-Blue Shield organizations, medicare and medicaid agencies, and other health insurance carriers be required to report unassigned payments for medical services.

Dr. Howard pointed out that millions of patients have more than one health insurance policy and may collect total benefits exceeding the physician's charge, and that some patients even may not use the insurance payment to compensate the physician. Physicians also would have to set up costly additional bookkeeping record procedures to list



Noludar[®] 300

(methypylon)

one capsule
for the rest
of the night

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE **Roche**
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

separately and in detail each charge to a patient in excess of \$25, the AMA official said.

"The proposal of the Treasury Department would place physicians in a unique category under our tax laws," Dr. Howard said. "We know of no other provision in the tax laws which singles out one class of individual taxpayers, requiring payers to report to the IRS individual payments made to taxpayers as well as the annual aggregate amount of such payments.

"We believe . . . that the proposed . . . amendment is unfair and discriminatory and would do little to accomplish any goal for an improved system. Instead, as an additional cost burden, it would place further pressure on the cost of medical care."

* * *

President Nixon, at a bill-signing ceremony, praised the new Drug Abuse Act for providing "a forward looking program" for treatment of drug addiction as well as strengthening the government's law enforcement powers in the field.

The new law provides for the Department of Health, Education and Welfare running extensive programs for the treatment and rehabilitation of drug users and for antidrug education. It authorizes HEW's National Institute of Mental Health to spend \$189 million over three years to build and staff treatment facilities, to support rehabilitation programs and to increase antidrug education programs. Another \$1 million is authorized for creation of a presidential commission on marijuana.

State comprehensive health plans getting federal aid must now include drug abuse programs, and an Administration spokesman suggested that all states model their drug control laws on the federal statute.

Before final passage, Congress modified the original legislation to meet many of the objections of the medical profession against a proposal that would have allotted most classification powers and research control to the Justice Department. The attorney general can declare drugs as dangerous but he is bound by HEW's medical and scientific evaluations.

The strengthened enforcement provisions are aimed at the drug pusher with lighter penalties for drug possession, particularly by minors. Federal first offense cases for drug users are lowered from felonies to misdemeanors. Under this provision, a person found guilty of possessing marijuana for the first time will not necessarily be subjected to an automatic stiff jail sentence, But to facilitate

(Continued on Next Page)

FEBRUARY 1971

Consultation INVITED

Doctor, you are an expert! Your education, experience and judgement are invaluable. When people need medical advice, they call on you.

We'd like you to call on us for advice and counsel on wines, — their origin, taste, aroma, bouquet, . . . the proper wine for each event. We specialize in wines. We have more than 2,000 types from which you can select. If you'd like to come in and browse, come on in. Join our Vintage Guild. It doesn't cost a cent, and it could become a real adjunct to the gracious living you deserve.

Consultations invited. No appointment necessary.



TOWN
Liquor

179 NEWPORT AVE., RUMFORD
434-4563

Hopkins

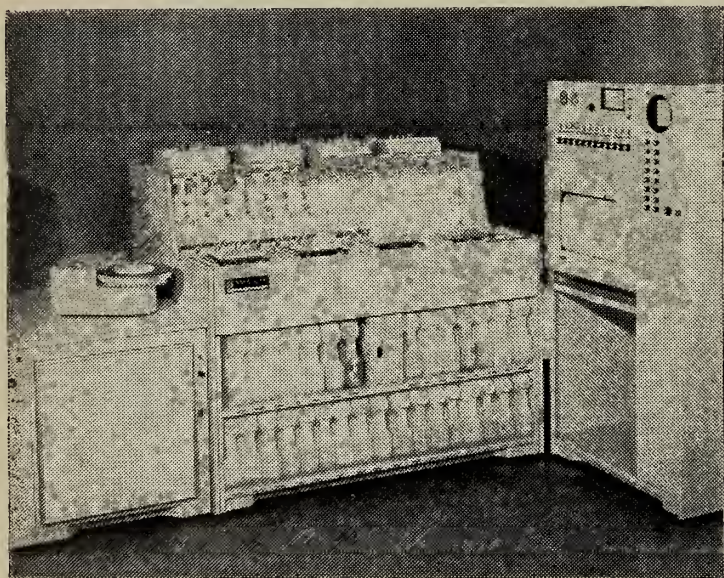
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

**ALL 20 PROCEDURES
\$15.00**



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

arrest of pushers, the controversial "no-knock" clause was retained,

Requirements as to records kept by physicians remain as under the old narcotics law except where he regularly dispenses a non-narcotic drug and charges for it.

The new law broadens the former narcotics statute to include, with varying restrictions and controls, amphetamines, barbiturates and other drugs ruled dangerous. At the start, controls will be drastically tightened over marketing the liquid form of amphetamines which can be taken by injection.

Companies producing or distributing a long list of commonly prescribed stimulants, depressants and tranquilizers will be subject for the first time to federal registration requirements. The Narcotic Bureau also now has a new power to set production quotas for such non-narcotic drugs.

Other health legislation recently enacted into law included:

—The Communicable Disease Control Act of 1970 which authorizes expenditure of \$210 over the next three years for vaccination and other control programs against tuberculosis, venereal disease, German measles, measles, polio, diphtheria, tetanus, whooping cough, RH disease, and other diseases judged by the Secretary of Health Education and Welfare to be major problems.

—The Regional Medical Programs and Comprehensive Planning and Services Act of 1970 extending the programs for three years with authorized spending of \$545 million for RMP and \$52 for CHP. Further appropriations totalling \$961.5 million for project grants for areawide health planning; training, studies and demonstrations; comprehensive public health services, and health services development. RMP is expanded to include kidney disease. The new law provides for a systems analysis of national health care plans and for a cost and coverage report on such legislation. A National Advisory Council on Comprehensive Health Planning Programs is created.

—The Health Training Improvement Act of 1970 which extends the allied health educational program for three years with aid to schools and students. Authorized appropriations total \$308.5 million. The maximum yearly loan will be \$1,500 and the maximum aggregate loan, \$6,000, for any student. A forgiveness of up to 50 per cent will be allowed if the student practices in a shortage

(Concluded on Page 112)

Pressures On The American Physician

*If Medical Practice Is To Be Changed,
We, The Purveyors Of Medical Services,
Must Be Among The Chief Cooks*

By Bertram H. Buxton, Jr., M.D.

The practice of Medicine, like most arts, is a product of the times. Like most professions, it is ultimately sensitive to multiple pressures, whether they are wrought by advances in applicable scientific knowledge or society for whom the physicians provide their services. Like most professions, it has been built upon past experience; and whenever evolutionary scientific, social, and political changes occur with near revolutionary speed, we find the physician no different from any other professional whose training and experience have taught him to proceed cautiously and to fortify each step with as realistic and logical judgment as he can muster. We must realize that, like the practice of Law, Medical practice results from a conformity of opinion based on orderly and logically collected data. This is systematized and taught, then modified year after year by the vast and swift advances in the social and biomedical sciences, often in such fractionated disciplines and diverse geographical locations that a number of years is required to

BERTRAM H. BUXTON, JR., M.D., of Providence, Rhode Island. Chief of Staff at Providence Lying-In Hospital and Clinical Professor at Tufts Medical School.

Presidential Address delivered at the 124th Annual Meeting of the Providence Medical Association, Providence, Rhode Island, January 4, 1971.

develop this new knowledge into a practicable and useful clinical tool.

Political, governmental, and consumer pressures upon the American medical practitioner are mounting in proportion to the costs of medical care, for which he is given the major share of blame, and academic and scientific medicine are "heating up" the so-called medical establishment from within. The news media find this extremely palatable fare for their pious attention and must believe that somehow this will increase their circulation or Hooper rating, or else perhaps it is to detract our attention from the fact that their costs in the past two years have soared far above the 12.9 per cent rise in medical care costs. In any event, the news media are turning on the heat.

Consumer pressure is an inevitable facet of medical practice; but traditionally it has been applied in individual dosage. Today we have organized consumer groups, each with special health interests. Labor unions, educators, management, poverty and welfare groups, Golden Agers and, of course, I must not forget those belligerent, bra burning, pill protesting female liberation groups — demanding abortion and the other necessities of life on command — all heatedly clamor for a voice in the control of medical practice and its costs. The glibness of many of the spokesmen for

(Continued on Next Page)

these organizations show that they have much to learn about the intricacies of redesigning, let alone directing, a sufficiently sensitive, effective, and flexible system to provide the necessary high standard medical care to all segments of American society. Each spokesman for these diverse groups has a focused health need interest and gives small thought to those in all of our society whose health requirements differ in amount, kind, and cost, because of age, cultural, social, educational, racial, economic, and bio-medical differentials. This may be a compelling reason for eventual governmental resolve to undertake the design and control of the delivery of health care.

The rise in the cost of medical care, although of apparent general concern, cannot be considered a logical major consumer concern. Third party payments soften the financial impact of medical costs on the consumer, but are readily appreciated by the steely-eyed entrepreneur and medical health care planners who, by their natural and professional concern, must be aware of this aspect of medical care. Consumer groups' increasingly heated antagonism toward the medical establishment is reflected also in the increasing volume of medico-legal actions, most of which may never reach the courts, because action is dropped for insufficient medical cause or settled because of their nuisance values. This is not to say that some are not settled out of court for a sufficiently justifiable cause, and this action is usually the result of a recommendation by a medical society's peer review grievance committee after a full and fair investigation. The current notion of the consumer to expect perfection in all forms of medical and surgical diagnosis and treatment, cultivated by the sophisticated purveyors of secular literature and television and the news media, increases the pressure on the medical practitioner to leave no stone unturned in order to make sure he is right and that his patient obtains the best possible result.

Were the consumer to develop priorities with relation to cost escalation, he would do well to reflect on this list of documented cost increases over the past eleven years: medical care, 20 per cent, U. S. Congress, 156 per cent, private college education, 80 per cent. In the same time, the cent mark has been deleted from the typewriter, three cent postage has doubled to six cents, and the one cent postcard now costs five cents. In the past two years, during which medical care costs have come into a firey focus, and have increased 12.9 per cent, the cost of protein foods has increased 13.6

per cent; restaurant meals have increased 12.7 per cent; transportation, 13 per cent; household operation, 14.2 per cent; foods, 22.3 per cent; men's and women's clothing, 12.8 and 12 per cent respectively; the cost of owning a home, 18 per cent; insurance and finance, 21.4 per cent; and the price of a daily newspaper, 50 per cent.

Elected politicians can exert devastating pressures on medical practitioners now and then because they have learned that matters concerning medical practice provide them ready, eager, and flamboyant press coverage. Certainly no obstetrician-gynecologist will forget the barrage of phone calls that besieged him during, and for several weeks after the Senate hearings on the "pill". A typical headline dramatizing the hearing findings, as well as the motives of the responsible press, read PILL AND CANCER LINKED. Then came the secondary wave of heated pressure, the result of the 25 per cent of women on oral contraceptives who abandoned the pill. To be sure, 50 per cent of these women are now back on oral contraceptives after the hearings' testimony had been placed in proper medical perspective; but what about those women who became victims of an unplanned and unwanted pregnancy, some of whom subjected themselves to abortion? What about those women who proceeded with their unplanned pregnancies, emotionally upset and often rejecting their husbands and families? Their resentment and hostility toward their physicians were an inevitable consequence.

Politicians, however, cannot hold a candle to the civil servant, often entrenched by tenure, in the implementing arm of the government, when it comes to turning on pressure. All will recall AMA testimony predicting the huge costs involved in the implementation of Medicare legislation prior to the passage of this bill by Congress. However, these estimates were refuted by testimony of government civil servants. It is, of course, now quite obvious whose estimates were more realistic. Moreover, it is not unexpected that doctors' fees will be fixed at the 75th percentile to help cut the costs of Medicare and Medicaid.

Perhaps the most vivid example of the potential tyranny that a government civil servant can exercise was a law enacted recently in the province of Quebec. Until a new liberal provincial government was elected in April, 1970, negotiations had been proceeding with mutual respect, amiability, and integrity between physician spokesmen and govern-

(Continued on Page 105)

Alcoholism—A Review And Overview Of The Problem

*For All The Happiness Mankind Can Gain
Is Not In Pleasure, But In Rest From Pain
(John Dryden)*

By Charles N. Hoyt, M.D.

In an era when confusion, poor organization, a struggle for leadership, and creeping government control characterize the health scene, we find the syndrome alcoholism seeking universal acceptance and appropriate therapeutic attention. Such an erroneously labeled "self-inflicted" illness can hardly be expected to receive top sympathetic and financial priority when the needs of the poor, the health insurance controversy, the country's economic and the taxpayers' crises, and the Vietnam War remain the critical issues. That alcoholism finds itself included in legislation and health schemes at all is progress compared with the picture two decades ago.

No one can deny that the nation is experiencing major health problems. Bureaucratic guide lines and controls have to date compounded the dilemma and, regrettably, the physician is slowly abdicating his role as a health leader. Pseudo-professionals have entered the health field and are seizing upon apathy and confusion to foster revolutionary ideas. That alcoholism may be used by

CHARLES N. HOYT, M.D., practicing internist, Columbus, Ohio.

Part of a symposium on alcoholism appearing in the July and August issues of the **Ohio State Medical Journal**. Reprinted from the July issue with the permission of the publisher and author through an arrangement with the State Medical Journal Group.

some of the social and health planners as a tool or an entering wedge for the disguised promotion of radical sociologic change is a distinct possibility.

THE PROBLEM

In spite of its being recognized as an illness by the American Medical, Psychiatric, and Hospital Associations, alcoholism remains an emotional issue, a controversial entity, a dirty word, a means of attracting federal dollars, but, most important of all, a neglected public health problem of pandemic proportions. That we face the matter with ambivalence and hypocrisy needs no elaboration. We are a drinking nation and one that feels a little guilty about its imbibing. Is it any wonder that those who "can't hold their likker" and fall by the wayside are shunned? There are as many myths and misconceptions about alcoholism as there were about epilepsy a century ago. Yet these are perpetuated by a drinking society out of sheer ignorance and defense of its own drinking.

The illness concept has not gained favor because it has not been taught. Today we find a scene of shameful neglect by a country which, in some areas, has developed a sophisticated technology that has surpassed man's ability to control it. Along with other areas of inattention, alcoholism becomes a fertile field for the invasive "involve-

(Continued on Next Page)

ment" of the organized do-gooders. Thus the illness becomes a double challenge to the physician. He must educate himself and treat the problem, and he must get back in the field of community health where his leadership and expertise are needed.

THE MAGNITUDE OF THE PROBLEM

For those who drink, alcohol creates difficulties (social, economic, health) for about 15 per cent. Of these, half are alcoholic, half are problem drinkers. Of greater significance is the estimation that between the ages of 35 and 50 years, the most productive years of a man's life, one out of every seven American males develops a drinking problem. Amongst the more affluent, the ratio of male to female alcoholics is now felt to be 1:1. If just the patient himself or herself were affected, the situation would not be as catastrophic. But it is calculated that for every person involved with alcohol excess, there are five other individuals caught up in the syndrome. The illness starts to take its toll early on the lives of the spouse and the children. The fellow worker feels the effects as does the employer and the neighbor, to say nothing of friends. If we choose to get dramatic about it, we wouldn't be too much in error if we implicated one-fourth of the country's population in the ravages of alcohol abuse.

Other figures are equally telling, particularly in the area of treatment services. Accommodations for the care of the acutely ill alcoholic are woefully lacking across the country. Jails, workhouses, and "lock-ups" dry out more alcoholics than all other facilities combined. Tragically and inexcusably, in this universal incarceration process, alcoholics are dying daily in delirium tremens (DTs), which, untreated, carries with it a 20 per cent mortality.

Of the nearly 300 state mental hospitals in the United States, about 25 per cent of the census is alcoholic. Fifty per cent of male first admissions are drinking problems. Yet only 10 per cent of these state facilities give special attention to the alcoholic.

Although a touchy subject, it has been estimated that 25 per cent of welfare recipients are alcoholic or have severe drinking problems. A recent informal survey of the records chosen at random of some 2,000 Title XIX (Medicaid) Ohio applicants or recipients (Aid for the Disabled and Aid for Dependent Children-I) revealed a 21 per cent incidence of diagnosed or strongly sus-

pected alcoholism. With the tendency of caseworkers to protect their clients, a materially higher percentage seems likely.

With the death rate from causes related to alcohol showing an increase of almost 60 per cent over the past 15 years, we find only about 10 per cent of general hospitals without psychiatric services admitting alcoholics and only 6 per cent treating chronic alcoholism. Yet we all know that most general hospitals "smuggle" in alcoholic patients under such quasi respectable cover diagnoses as "gastritis," "malnutrition," "acute brain syndrome," "pancreatitis," "hepatomegaly," "depressive reaction," "character disorder," and "schizophrenia, paranoid type." This subterfuge is employed to protect the patient and his insurance program, but it shields his drinking, perpetuates the illness, and supports the denial mechanism of the alcoholic, the biggest stumbling block to productive patient rapport.

THE ILLNESS CONCEPT

The late E. M. Jellinek of Yale, a biostatistician, developed an interest in alcoholism back in the thirties and, along with Howard Haggard, M.D., founded the Yale School of Alcoholic Studies (now located at Rutgers University). He had more than superficial contact over a period of years with several thousand alcoholics and formulated criteria for the diagnosis and a classification of alcoholism. These remain totally adequate and internationally accepted today, and a review of the principles will help to clarify the illness theory. Appreciating these concepts, I think most physicians will come to recognize why many of us feel that alcoholism is an illness per se, and not necessarily a symptom of some other underlying condition.

Initially we start with a definition, and a medically oriented one is worded: Alcoholism is a chronic, progressive, relapsing disease complex, with probable inherited features, characterized by preoccupation with alcohol and loss of control over its compulsive consumption. Simplification helps better to understand the classification of drinking problems. For years two types of drinkers were acknowledged, those who could control their intake, and those who couldn't. Experts later described primary and secondary alcoholics, the former becoming recognized as the true alcoholic or the alcoholic addict, the secondary type defined as the reactive or the symptomatic or the problem or the non-addictive drinker. The separation of

alcoholics into addictive and non-addictive types appears to have definite clinical value.

Using the Greek alphabet in his typology, Jellinek spoke of four major categories of alcoholism: Alpha, Beta, Gamma, and Delta. The Alpha alcoholic, or the symptomatic or the problem or the non-addictive drinker, is using alcohol to make life more bearable. Alpha alcoholism is a purely psychological reliance upon alcohol to relieve psychic pain. The drinking is undisciplined in the sense that it contravenes such rules as society or the individual's peer group agree upon, but it does not lead to loss of control or inability to abstain. There may be considerable associated psychiatric illness. There may be interference with the harmony of the household, the family budget, and the employment record, but there are not any signs of a progressive process. This species cannot be regarded as an illness in and of itself.

Beta alcoholism is the type in which such medical complications as gastritis, cirrhosis, polyneuropathies, and other pathology may occur without physiological dependence on alcohol. The damage is not only physical, but there is impairment of economic functioning. The life span of the individual is shortened. Exogenous factors such as social, cultural, and vocational influences may predispose to this type drinking, which may be deviant by some standards but totally acceptable by others. The traditional example of the latter is the viticultural setting of France, where wine plays an important part in the life of the individual. We may be seeing the emergence of this species of alcoholism in this country associated with certain vocations, where the custom may be neurotic, but where the patient shows little physical or psychological dependency. Beta alcoholism also cannot be regarded as an illness in itself, but both it and Alpha alcoholism may evolve into alcohol addiction.

THE ILLNESS

The Gamma and Delta species are those recognized as classical alcoholism. Both represent true physical addiction, addiction at the cellular level, and one might postulate that these types have a high degree of genetic biological determinacy for addiction to alcohol. Gamma alcoholism appears to be the predominating species in this country, and it is this category that comprises about 75 per cent of the A. A. community. Both Gamma and Delta alcoholism are illnesses in and of themselves; they are the "disease" as originally described by Jellinek.

Persons so afflicted may have varying degrees of psychological vulnerability at the onset of their drinking careers, but the important factor to appreciate is that the early history of a significant percentage of these alcoholics does not reveal immature, neurotic, or psychotic problems. These people drink for pleasure, many excessively, and over a period of years (5 to 15), the addictive process takes over. As Jellinek described, there occurs in the Gamma and Delta alcoholic an increasing tissue tolerance for and an adaptive cell metabolism to alcohol. Alcohol becomes incorporated in the metabolic cycles of the cells of the body. These cells behave as if they have become used to the substance, so that alcohol assumes the characteristics of a chemical constituent required by these cells. The organism is changed in such a way that it seems to get along better with alcohol (for a while) than without it. An artificial need for the drug has been created as a result of prolonged, excessive drinking.

As the Gamma and Delta alcoholics find themselves drinking more and more over a period of years to achieve the same pleasurable effect, they learn that alcohol relieves tension and anxiety and frustration. Alcohol is now used to handle emotional emergencies, and the addictive process is accelerated as the alcoholic conditions himself to drinking for pleasure and drinking to relieve pain—for alcohol still brings positive rewards. Then something happens! A critical milestone in the drinker's career is reached. Call it a point of no return, but it is probably when irreversible physiologic addiction sets in. Now the alcoholic's tolerance for the drug decreases; it requires progressively less alcohol to produce now an entirely different effect, an effect or personality change that is totally out of character for the patient. The spouse frequently refers to this phenomenon as "He's a regular Jeckyll and Hyde now when he drinks; he never used to be that way." (This reaction is not to be confused with the acting out of the emotionally disturbed intoxicated individual.) The uncontrolled and inappropriate hostility, aggressiveness, and antisocial behavior encountered probably represents a toxic psychosis, but the ease with which it is precipitated would suggest some dramatic alteration in the pharmacologic action of alcohol on the brain. Alcohol, acetaldehyde, and the biogenic amines are discussed in another paper in this symposium.

Two other characteristics or symptoms appear

(Continued on Next Page)

in Gamma and Delta alcoholism indicative of physiologic dependency. The alcoholic begins to experience withdrawal symptoms when alcohol is leaving or has left the blood stream. In its mildest form, the withdrawal syndrome is manifested by tremulousness and "inward nervousness." This is suddenly first experienced by the heavy drinker for example on a Monday morning after a hard-drinking weekend. The "shakes" may be reflected in the handwriting or in the unsteady attempt to get the coffee cup to the mouth; or the patient may state that he feels so "nervous" that he is going to "fly apart." The drinker soon learns that the treatment of choice of first stage withdrawal is alcohol. The morning drink, sneaked at home or on the way to work, or the martinis or beer at lunch, soon handle his shakes, clear his head, quiet his churning stomach (after he has kept the first one down)—and it is as if he has made a great discovery. But he necessarily guards it secretly and soon finds himself drinking surreptitiously.

It is not within the province of this paper to discuss the other components of the abstinence syndrome, but I will mention them in the order of their severity because they represent one of the more serious of the medical problems of the alcoholic. Aside from morning tremulousness and nausea, we next recognize hallucinations, both visual and auditory, then seizures or alcoholic epilepsy or (recently coined) "alkalepsy." Finally comes delirium tremens (DTs), the most dramatic and grave of the acute complications the alcoholic experiences. Whereas the patient can control his shakes and frequently the hallucinations by re-establishing the blood alcohol level, DTs is a medical emergency requiring the attention of trained personnel in a hospital setting.

The fourth characteristic that identifies the alcohol addict is loss of control. In the instance of the Gamma alcoholic, he is unable to control his intake once he starts drinking; he doesn't set out to get drunk, but he invariably winds up that way. The Delta alcoholic on the other hand may be able to partially control his intake at any one period of time, but he is unable to abstain on a day-to-day basis without the manifestation of withdrawal. Thus undisciplined use of alcohol characterizes the illness alcoholism, but if we recognize the physical dependency involved, we more readily respect the severity of the problem.

To recapitulate, and focusing on the Gamma alcoholic, the predominating species in the United States, it isn't just a simple matter of taking a

drink to calm the addict's nerves. The alcoholic has become preoccupied with drinking; the hour of the next drink becomes a critical issue, and both his conscious and subconscious are planning his alcohol schedule. He soon unwittingly programs his day around beverage alcohol, for now he is drinking to live. Alcohol has indeed taken charge and completely controls and dominates his life. The craving for it and loss of control, the *sine qua non* of alcoholism, is not a simple psychologic process; it is a complicated biochemical and neuro-physiologic mechanism.

THE PSYCHOLOGY INVOLVED

As psychologically oriented professionals, we physicians, by virtue of a constant authoritative contact with people, become cracker-barrel psychiatrists. We "psych out" and analyze patients, whether consciously or unconsciously, and some of us become indignant when our opinions are challenged. The field of alcoholism is full of such "experts." Add their ideas to the theories of especially trained alcoholologists and psychiatrists, and you have as many etiologies of the illness as you have authors.

In discussing some of the psychology involved in alcoholism, it becomes apparent that we are talking about people in general with various personality traits and various potentials for neurotic and psychoneurotic illness. At the moment we are still forced to conclude that there exists a multiplicity of psychodynamic factors in alcoholism that are also present in both normal states and psychiatric illness. Situational, cultural, physical, and sociologic conditions may be decisive in the alcoholic's response to his psychodynamic structure. That through the ages alcohol in some form has been the most popular and readily procurable "tranquilizer" is a fact that cannot be minimized.

Most experts agree that there is none such as an alcoholic personality, but the addict or Gamma (and Delta) species has certain outstanding characteristics that are repeatedly encountered and that have come to typify the alcoholic. As R. Fox has noted: "A certain cluster of personality traits are found in most alcoholics during the active phase of the disease. These traits, however, may be as much a result of the years of addictive drinking, as they are the cause." The traits most frequently seen are described. There is a low threshold to frustration, conscious or subconscious rebellion and hostility, a tendency toward anti-authoritative feelings, and dependency needs; ego-

centricity is glaring and a superficial, extractive, manipulative relationship with people is the rule. Repetitive acting out of conflicts is seen when drinking, and narcissism and exhibitionism are characteristic. As if compensating for a devaluated self-esteem, a feeling of (or longing for) omnipotence becomes the most persistent and annoying trait of all. A thread of this runs through every activity of the alcoholic's life, and it becomes the principal barrier to recovery. As the first Three of the Twelve Steps of Alcoholics Anonymous imply, the alcoholic must admit and accept that his all-powerful self-image is "powerless" over something; that there is indeed Somebody bigger and better and wiser than he and that he must let this Somebody run his life if he expects to recover. The alcoholic's sense of omnipotence, of invulnerability is truly remarkable. Harry M. Tiebout, M.D., wrote: "The patients create the impression that the disaster, however threatening, cannot affect them. They are physically untouched by danger. While consciously troubled, they have a serene, unconscious belief in their own survival; they just cannot be licked."

The alcoholic is quite sensitive and may exhibit extreme mood swings. Somatic preoccupation and hypochondriasis are sometimes seen. Many patients show evidence of psychosexual immaturity. Indeed, it is immaturity, a regression to the child-like state, that characterizes the drinking personality of the patient. It cannot be stressed too strongly, as referred to above, that what we have described here of the alcoholic may in no way represent his personality before the addictive process took over. This is frequently borne out clinically and represents the problems encountered by the psychiatrically oriented therapist or counselor who has been taught that alcoholism is symptomatic of something else. These professionals forever look for the "something else," for the occult, while the patient continues on with his drinking career, his very personality precluding satisfactory communication with the therapist. It has been my experience, and that of others in the field, that if we remove alcohol from the picture, that is treat first things first, the majority of the emotional problems and many of the obnoxious traits of many an alcoholic will take care of themselves.

As the disease process becomes arrested, we see other features appear that a number of recovering alcoholics share in common. These people tend to be meticulous and perfectionistic. They are self-doubting, yet stubborn in their convictions.

They have an exaggerated sense of duty and achievement. They become harassed by responsibilities, an excess of which they may seek. They may be overinhibited, possessing a strict, perhaps surplus conscience which becomes a driving force. They are happiest when achieving, yet never totally satisfied with a job well done. Thus they may have unrealistic goals, and, as many find it difficult to carry on work under pressure, frustration comes readily. There is a lack of a normal capacity for relaxation and as tensions mount, so do anxieties which are frequently poorly handled. There is a tendency toward impulsiveness, and this, coupled with obsessive qualities, makes it mandatory that things be done right now—if not sooner.

The above profile would suggest that all alcoholics are compulsive people. This is only partially true. The new American Psychiatric Association nomenclature describes 12 personality variants. Quite obviously all types drink, and a certain percentage of all types get into trouble with alcohol. However, the personality structure that seems to have the best prognosis, the one that is seen actively and happily involved in A.A., is the one whose compulsive features are outstanding. Schizoids and cyclothymes and antisocial and inadequate personalities become heavy drinkers, even addicts, but it is my clinical impression that there is a particular proneness for the obsessive-compulsive readily to become physiologically dependent on alcohol. This deserves further investigation.

TREATMENT

No one will deny that alcoholism costs more in suffering and money than any other illness. Yet as a nation our treatment approach can only be described as deplorable. Admittedly the etiology of the problem remains obscure and current technics inadequate. Yet in spite of significant breakthroughs in neurochemistry that may herald a new era in appreciating behavior and addiction mechanisms, treatment solutions will still lag. The reason can be summed up in one word—*attitude*. Society's reaction to the alcoholic remains largely hostile. This in part reflects the moralistic teaching of previous generations. But in a nation that simultaneously encourages drinking and punishes drunken behavior, it also reflects society's ambivalence and guilt about its own drinking. It is no wonder that the stigma is perpetuated as society continues to condone punishment of the alcoholic.

As a multifactorial illness, the treatment of

(Continued on Page 102)

The Rubinstein-Taybi Syndrome

Report Of Five Cases

Investigations Have Revealed No Genetic Pattern, Chromosomal Abnormality, Metabolic Defect, Or Prenatal Insult

By Venetia B. Georas, M.D.; J. Brian May, M.D.;
Paul H. LaMarche, M.D.

In 1963 Rubinstein and Taybi described seven children with a constellation of congenital anomalies, severe mental retardation, and remarkably similar facies¹. They subsequently reported six additional cases². The authors postulated that this may represent a new syndrome although the possibility of chance association could not be ruled out.

Since 1963 a number of reports of similar cases has appeared from various countries. Recently the first case in an African Negro was described³. Rubinstein has reviewed 114 reported cases⁴.

The terminology used in the literature includes "Broad Thumbs and Toes and Facial Abnormalities"¹; "Rubinstein's Syndrome"⁵; "Broad Thumbs Syndrome"⁴; "Broad Thumbs and Toes and Unusual Facial Features—A Probable Mental Retardation Syndrome"²; and "Digito-Facial Mental Retardation Syndrome"⁶.

The findings present in all cases include broad thumbs and great toes, characteristic facies, and mental retardation. A variety of associated con-

genital anomalies is commonly present. In addition to delayed psychomotor development, significant feeding, respiratory, and genitourinary problems are frequent complications (Table I).

The incidence of the Rubinstein-Taybi Syndrome in the general population has not been established. The estimated incidence is 1:300 in the institutionalized mentally retarded population of Ontario, Canada⁷. In the Diagnostic Clinic population of Cincinnati, Ohio, the frequency is 1:267⁴. Other investigators report a frequency of 1:500⁸ and 1:720⁹.

No statistically significant difference as far as sex distribution, family history, or parental age at birth has been found.

CASE REPORTS

We should like to present five additional patients, all of whom have varying degrees of cardiac abnormalities.

Case No. 1 (J.B.R.) is a male born following a 39-week gestation complicated by sporadic spotting during the first trimester. Mother was a 37-year-old G VIII, P VIII. Father's age at birth of child was 39 years. There is no family history of congenital anomalies or mental retardation. The labor and delivery were uneventful. Birth weight was 5 lbs. 8 oz. The neonatal period was complicated by feeding problems and failure to gain weight.

VENETIA B. GEORAS, M.D.; J. BRIAN MAY, M.D.; PAUL H. LaMARCHE, M.D.; Child Development Center, Department of Pediatrics, Rhode Island Hospital, Providence, Rhode Island. Aided in part by a grant from the National Foundation, March of Dimes.

On physical examination at age 3 months, he weighed 7 lbs. 4 oz. (below third percentile). His height was 20¾ inches (below third percentile). Head circumference was 37 cm. (below 2 standard deviations from the mean)*. The psychomotor development was markedly delayed. He had no head control, and no social smile. The thumbs and great toes were broad and flat. The distal phalanges of the rest of the fingers were wide (Fig. 1 and 2). The facies was characteristic of Rubinstein-Taybi Syndrome (Fig. 3). The right eye was enophthalmic. There was alternating esotropia and horizontal nystagmus. The tear ducts were

TABLE I
Associated Congenital Anomalies

| | |
|----------------------|--|
| EYES | Eso—or exotropia Refractory errors Micro-anisophthalmia Synophrys-ptosis Coloboma (iris or retina) Obstructed tear ducts |
| HEAD | Microcephaly Frontal bossing Large fontanel—Delayed closure of fontanel |
| SKELETON | Duplication of phalanges of great toes, thumbs Subluxation of thumbs Kyphoscoliosis Pectus excavatum Rib anomalies Spina Bifida Retardation of skeletal maturation |
| EARS | Small, square Low placed |
| SKIN | Hypertrichosis, face, back, extremities Nevus flammeus forehead, nape of neck, lumbosacral spine Abnormal dermatoglyphics |
| HEART | Patent ductus arteriosus Septal defects Endocardial fibroelastosis Heart murmurs |
| GENITOURINARY SYSTEM | Undescended testes Kidney anomalies Repeated urinary tract infection |
| G.I. | Persistent regurgitation Persistent vomiting Slow weight gain—Failure to thrive |
| RESPIRATORY SYSTEM | Repeated upper respiratory infections Aspiration Pneumonia Repeated pneumonia |

*NELLHAUS G: Head circumference from birth to eighteen years. Practical composite international and interracial graphs, *Pediatrics* 41:106-114, Jan. 68.

obstructed. The nose was beaked and chin was recessed; he had fishmouth lips and high palate. The ears were small and low set. There were simian lines bilaterally and hirsutism on the back, as well as a nevus flammeus on the nape of the neck and over the lumbosacral area. There was a grade III (I-VI) short systolic murmur at the left sternal border. Generalized hypotonia was present. On the Denver Developmental Scale, he failed all tasks. (Laboratory investigation is included in Table II.)

Case No. 2 (D.P.) is a male born following an uncomplicated 40-week pregnancy to a 31-year-old G II, P II mother. The father's age was 36 years. There is no family history of congenital anomalies or mental retardation. Labor, delivery, and neonatal period were reported uneventful. The birth weight was 6 lbs. 11 oz. The birth length was 20 inches. Development was delayed. He did not walk until age 24 months and had no speech development.

Physical examination at age 3 years: height was 37 inches (50th percentile); weight was 36½ lbs. (75th percentile); head circumference was 47.5 cm. (below 2 standard deviations from the mean). He was severely retarded. The thumbs were broad and spatulated as well as the great toes, which clinically suggested duplication of the distal phalanges (Fig. 4 and 5). The facies was characteristic of Rubinstein-Taybi Syndrome (Fig. 6). The palpebral fissures had an antimongolian slant; the right eye was smaller than the left and enophthalmic. Alternating strabismus was present. The hairline was low on the neck and forehead. Synophrys was present. The palate was high. The scrotum was atrophic with undescended testes. An inconstant heart murmur was heard along the left sternal border (Laboratory investigation is included in Table II.)

Case No. 3 (J.B.E.), a male, was the product of an uneventful 40-week gestation. The mother was a 42-year-old G III, P II. There was a history of a miscarriage two years prior to this pregnancy. The father's age was 46 years. There is no family history of congenital anomalies or mental retardation. The neonatal period was complicated by serious feeding difficulty, gagging, regurgitation, vomiting with slow weight gain, and an episode of pyelonephritis. He continued to have feeding problems and frequent upper respiratory infections. When he was first seen at age 22 months, he presented as a severely retarded

(Continued on Next Page)

TABLE II
Laboratory Investigation

| | J.B.R. | D.P. | J.Be. | M.B. | M.W. |
|--------------------------------------|--|--|---|--|---|
| Hemogram | normal | normal | normal | normal | normal |
| Urine chromatography, amino acids | normal pattern | normal pattern | normal pattern | normal pattern | normal pattern |
| Urine for Homocystine | negative | negative | negative | negative | negative |
| Chromosome analysis | 46, XY | 46, XY | 46, XY | not done | 46, XX |
| EKG | abnormal (non-specific) | abnormal (non-specific) | not done | abnormal (non-specific) | abnormal (non-specific) |
| X-ray hands | Large distal phalanges of thumbs short 4th metacarpal. | Thumbs: short proxi- mal phalanges; dis- tal phalanges show medial luxation. | Thumbs: dislocation proximal phalanges, increased distance between digits. | Thumbs: terminal pha- langes broad and flat. | Thumbs: large distal phalanges, anomalies in articulation 1st metacarpophalan- geal-angeal joint. |
| X-ray feet | Large distal phalanges of great toes. | Reduplication of distal phalanges great toes, partially joined, 1st metatarsal poorly de- veloped. | Dislocation deformity 1st metatarsophal- angeal joint. | Large terminal pha- langes join with lat- eral segment of the proximal phalanx of the great toe. Acces- sory bone at base of I.P. joint. | Large spade-like distal phalanges of great toes. |
| Skull | normal | normal | Orbits in vertical posi- tion, hypertelorism. | not done | not done |
| Spine | not done | not done | Spina bifida D1 | Spina bifida L5, ky- phoscoliosis. | Spina bifida L5. |
| EKG | sinus tachycardia; con- sistent with R & L ventricular hypertro- phy. | RBBB | RBBB | Biventricular hyper- trophy. | Cor pulmonale. |
| Psychological testing | Failed all tests at 3 months. Denver De- velopment Scale. | no formal testing | CA 4 5/12 IQ 29 | CA 3y IQ 35 | Very low, no formal testing reported. |

boy with a height of 27 inches (below third percentile), weight of 23 lbs. (third percentile), and a head circumference of 43 cm. (below 2 standard deviations from the mean).^{*} The thumbs and great toes were broad and flattened; the rest of the fingers short. The facies closely resembled patient D.P., Case 2. He had a prominent forehead with a fading nevus flammeus, low hairline, synophrys, beaked nose, and recessed chin. The palpebral fissures had an antimongolian slant, and left esotropia was present. The palate was high. A grade II (I-VI) systolic murmur was present at the pulmonic area. The testes were not descended. (Laboratory investigation is included in Table II.)

Case No. 4 (M.B.), a female, was the product of an uneventful 40-week gestation of a 19-year-old G I, P I. The father's age was 23. There was no family history of congenital anomalies or mental retardation. Labor and delivery were uneventful. Birth weight was 6 lbs. The diagnosis of congenital heart disease was made at birth because of cyanosis of the fingers and toes and a heart murmur. Frequent upper respiratory infections occurred during the first year of life.

When she was first seen at age 3 years, she presented as a severely retarded girl, poorly developed (below third percentile for height and weight), with a head circumference below 2 standard deviations from the mean. The thumbs and great toes were broad and flattened. Mild clubbing and cyanosis of the fingers and toes were present. The forehead was prominent with low hairline. There was synophrys and a nevus flammeus. The right eye was microphthalmic and enophthalmic. There was a moderate ptosis of the right eyelid and alternating strabismus. The nose was beaked and the palate was high. The ears were small, square, and low set. Moderate hirsutism of the back and extremities was noted, as well as kyphoscoliosis of the lumbar spine. The examination of the heart revealed a widely split P2 and a grade III (I-VI) midsystolic murmur at the left sternal border. Cardiac catheterization established the presence of a high ventricular septal defect with pulmonary hypertension and bidirectional shunt.

Her course has been complicated by upper respiratory infections, progressive cyanosis, and kyphoscoliosis. (Laboratory investigation is included in Table II.)

Case No. 5 (M.W.), a female, was born following a 40-week gestation to a 24-year-old G I, P I. Father's age is not known. Both labor and delivery were uneventful. The birth weight was

5 lbs. 3 oz. Persistent regurgitation and vomiting from birth presented serious feeding problems with failure to gain weight. Repeated episodes of pneumonia occurred during the first nine months of life.

She was first seen at age 7 months. At that time she was a poorly developed infant with delayed psychomotor development and generalized hypotonia. The weight was 12 lbs., 6 oz. (below the third percentile); height was 25¾ inches (at the third percentile); head circumference was 39.5 cm. (below 2 standard deviations from the mean).^{*} The anterior fontanel measured 4.5 x 4.5 cm. The thumbs and great toes were broad and flattened. The palpebral fissures had an antimongolian slant. The left eye was microphthalmic and right estropia was present. The pinnae were small and thick. There was micrognathia and high palate. Pectus excavatum was noted and a nevus flammeus was present on the lumbosacral area. This patient had a stormy course of almost continuous episodes of respiratory infections (aspiration pneumonia, laryngotracheitis) requiring numerous hospital admissions. At age 2 8/12 years, she developed cor pulmonale and expired. (Laboratory investigation is included in Table II.)

DISCUSSION

In their original report Rubinstein and Taybi speculated: "It is possible that these cases represent the chance association of unrelated clinical findings not necessarily indicative of any particular pattern or cause; nevertheless, the alternative possibility exists that the seven cases may represent a single clinical entity. If the latter possibility is confirmed, this identification may be the first step leading to further investigation for a possible common pathogenesis"¹. It is well accepted at this time that the Rubinstein-Taybi Syndrome represents a clinical entity.

Most of the reported cases have been detected among institutionalized populations. The recognition and diagnosis of this syndrome can be made on clinical examination at an early age, allowing the physician and the patient's family to anticipate an infant with multiple difficulties, i.e., feeding problems, failure to thrive, respiratory infections, and delayed development. The majority of patients have moderate to severe retardation.

The incidence of cardiac anomalies is not well defined. A heart murmur was recorded in 28 of 91 cases⁴, heart disease was recorded in 16 of 60

(Continued on Next Page)

cases⁴, including patent ductus arteriosus, six cases^{10, 2, 8}; atrial septal defect, two cases⁴; ventricular septal defect, one case⁴; fibroelastosis, one case¹⁰; patent foramen ovale, one case⁴; left superior vena cava, one case⁴; and pulmonary stenosis, one case⁴. One patient had the Wolf-Parkinson-White Syndrome⁴.

Our group of five patients presented the following cardiac findings: Cases 2 and 3 had a heart murmur clinically characterized as insignificant. Electrocardiographic findings of incomplete right bundle branch block were present in both. Case 1 had a systolic murmur and findings suggestive of slight biventricular enlargement radiologically and by electrocardiography.

Case 4 had a high ventricular septal defect with bidirectional shunt demonstrated by catheterization at age 3 years. Presently at age 16 years she has developed Eisenmenger's Syndrome. Case 5 developed cor pulmonale. Pathological examination revealed marked muscle fiber hypertrophy of the right ventricle and right atrium without congenital valvular or septal defects. The physiologic cause of the cor pulmonale was not clearly demonstrated at autopsy. Arteriolar hypertrophy was not sufficient to account for her pulmonary hypertension rather it was of the type which may be seen secondary to chronic congestive heart failure or chronic cor pulmonale.

SUMMARY

We have presented five cases of Rubinstein-Taybi Syndrome. The clinical findings are consistent and characteristic in all cases. Investigation to date has failed to reveal any consistent findings to indicate genetic pattern, chromosomal abnormality, metabolic abnormality, or prenatal insult (such as infections or drugs).

All of our patients were referrals from the community; the four surviving patients continue to live at home.

The importance of an early diagnosis has been emphasized.

ADDENDUM

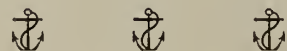
A sixth case has been seen at the Child Development Center. She is a 13-month-old female born to a 20-year-old G I, P I mother and a 21-year-old father. She presents with the clinical findings of Rubinstein-Taybi Syndrome with psychomotor retardation. Laboratory investigation is incomplete at the present time.

ACKNOWLEDGEMENTS: We wish to thank

Doctors Edwin Vieira, Eric Denhoff, John Nestor, Jay Orson and William McDermott for allowing us to study these patients.

REFERENCES

- ¹RUBINSTEIN JH, TAYBI H: Broad thumbs and toes and facial abnormalities. A possible mental retardation syndrome. **Amer J Dis Child** 105:588-608, Jun 63.
- ²TAYBI H, RUBINSTEIN JH: Broad thumbs and toes and unusual facial features. A probable mental retardation syndrome. **Amer J Roentgen** 93:362-6, Feb 65.
- ³SINNETTE C, ODEKU EL: Rubinstein-Taybi syndrome: the first case in an African child and the first case recognized at birth. **Clin Pediat** 7:488-92, Aug 68.
- ⁴RUBINSTEIN JH: The broad thumbs syndrome—progress report 1968. First Conference on the Clinical Delineation of Birth Defects. Part II—Malformation syndromes. 5:25-41, Feb 69. The National Foundation March of Dimes, New York.
- ⁵McKUSICK VA, editor: Medical genetics. An annotated review of extracts 1961-1963. Pergamon Press, Oxford and New York, 1966. P. 443.
- ⁶SAKURAI EH, MITCHELL DF, HOLMES LA: Some craniofacial dysostoses: (Pierre) Robin's syndrome, Treacher Collins' syndrome, and a digito-facial-mental retardation syndrome. Report of three cases. **J Oral Med** 21:44-7, Jan 66.
- ⁷PADFIELD CJ, PARTINGTON MW, SIMPSON NE: The Rubinstein-Taybi syndrome. **Arch Dis Child** 43:94-101, Feb 68.
- ⁸BERG JM, SMITH GF, RIDLER MAC, et al.: On the association of broad thumbs and first toes with other physical peculiarities and mental retardation. **J Ment Defic Res** 10:204, 66
- ⁹COFFIN GS: A syndrome of retarded development with characteristic appearance. **Amer J Dis Child** 115:698-702, Jun 68.
- ¹⁰COFFIN GS: Brachydactyly, peculiar facies and mental retardation. **Amer J Dis Child** 108:351-359, Oct 64.



E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

**178 ANGELL STREET
PROVIDENCE, R. I.**

Gaspee 1-2512

Pharmacy License No. 225

The Australia Antigen And Viral Hepatitis

Presence Of Australia Antigen Is Strong Indication Of Active Disease Due to SH Virus

By Robert V. Lewis, M.D.

Serum hepatitis, frequently seen following blood transfusions, can be positively diagnosed by the presence of the Australia antigen. This antigen is easily demonstrated by simple complement fixation tests or the more difficult double immunodiffusion technique⁶. The precipitated antigen, when studied by electron microscopy, strongly suggests by the spherical shape and the size of the particles that the antigen may actually be the virus¹. By the use of the Australia antigen, knowledge in the field of viral hepatitis has been greatly expanded and simplified.

DERIVATION

The substance designated as the Australia antigen by Blumberg derives its name from being first noted in an unrelated study of inherited blood antigens. Blumberg while testing the serum of a hemophiliac patient who had been transfused on multiple occasions against the serum of an Australian aborigine had noted a precipitation⁷. For a while the antigen was considered to be an inherited blood antigen. Further observations, however, showed that the antigen is associated only with that disease commonly known as *serum hepatitis* or post transfusion hepatitis. Thus, by pure

ROBERT V. LEWIS, M.D., Physician, Department of Medicine, Rhode Island Hospital; President, Rhode Island Society of Internal Medicine.

serendipity, the most important diagnostic test for serum hepatitis was discovered. From studies with this antigen by Krugman at the Willowbrook State School, it is now known that *serum hepatitis* may be transmitted by the oral-fecal route and may mimic *infectious hepatitis* in most of its clinical aspects. Incubation times alone distinguish the two types clinically, Australian antigen associated infections having the long incubation period characteristic of serum hepatitis.

PRACTICAL CLINICAL APPLICATION AND USEFULNESS

The demonstration of the Australia antigen in the serum of a jaundiced patient with obvious widespread hepatic cell disease is the single most conclusive test for the diagnoses of *serum hepatitis*, that is, hepatitis caused by the SH, long incubation time, virus. The antigen is detectable as early as 35 days after exposure with contaminated blood products, or as late as 120 days. The presence of the antigen may be transient, lasting not over a week. In the majority of cases it will last for several months, and in many patients permanently. Obviously and conclusively, as a corollary, the presence of Australia antigen in donated blood interdicts its use; for clearly the donor has had hepatitis, and the presence of the antigen indicates

(Continued on Next Page)

that there is active virus still in the serum. Routine testing of blood donors for Australian antigen is the most useful method of preventing transfusion hepatitis. The routine periodic testing of patients who have received multiple transfusions for the development of Australia antigen will detect the development of hepatitis, but the course of serum hepatitis is little altered once the antigen is detected, since by then the disease has developed and will run its inexorable course.

DIFFERENTIATION OF INFECTIOUS HEPATITIS AND SERUM HEPATITIS BY THE AUSTRALIA ANTIGEN

Demonstration of the Australia antigen makes a positive diagnosis of *serum hepatitis*. Serum hepatitis and infectious hepatitis are both of viral origin; they are thought to be due to different viruses; both the diseases have distinct differences in their natural history. Serum hepatitis has long been considered to be infectious only by needle transmission; its incubation period is between 35 to 160 days; its clinical course is usually manifested by an insidious onset without fever. By contrast, infectious hepatitis classically has been considered to have a short incubation period, 15 to 40 days; its course in the early stages is typical of a generalized viral infection with chills, fever, adenopathy, malaise, and prostration. These prodromal findings usually disappear with the onset of jaundice. Although it is oversimplification, the clinician may still hold to these paradigms, including the generally observed fact that there is no cross immunity between *infectious hepatitis* and *serum hepatitis*. However, these models must be modified by the results of studies utilizing the Australia antigen.

Generally speaking, where the clinical course is typical of the disease we have labeled *infectious hepatitis*, the Australia antigen *will not* be demonstrated. If the clinical criteria suggesting *serum hepatitis* is present, roughly 97 per cent of patients *will* show the Australia antigen. Now the difficulty arises in that the dichotomy between these two clinical types is nowhere near as clear-cut as had been assumed. For example, by use of the Australia antigen it has been shown that the virus of serum hepatitis is transmissible by other routes than inoculation, and clearly so by feces⁵. The feces of serum hepatitis patients is definitely contagious, but with a lesser degree of infectiousness than the infectious hepatitis feces, which are highly so. Infectious hepatitis will occur in epidemic form in institutions, or places where there

is a common contaminated water supply. The recent Holy Cross football Team epidemic and the Keene, New Hampshire epidemic of a few years ago illustrate this fact.

The patient with *serum hepatitis* following multiple blood transfusions should show the Australia antigen. If the serum does not, it well may be that the patient, despite his multiple transfusions, is suffering from typical *infectious hepatitis*, and his disease may not be the result of the transfusions. Conversely the demonstration of the Australia type antigen in a patient with what appears to be acute infectious hepatitis is evidence that the patient probably has contacted serum hepatitis even without needle sources. One theoretical special situation makes the exception. It is possible for a patient to have infectious hepatitis *and* a positive Australia antigen. This rare situation would occur if a patient had a persisting positive Australia antigen from a previous episode of serum hepatitis and developed anew a case of infectious hepatitis. There is no cross immunity.

DIFFERENTIAL DIAGNOSIS

Australia antigen has been found in Down's Syndrome, leukemia, and nodular leprosy, and in normal healthy individuals who live in the tropics, especially South East Asia. If an individual does not belong to one of these sets, the presence of the Australia antigen is evidence that he has or has had serum hepatitis. Since, however, the Australia antigen will disappear from the blood in 90 per cent of patients by the end of four months, the presence of Australia antigen gives a nine to one probability that the patient has active disease due to the SH virus.

FUTURE DEVELOPMENTS

By means of the Australia antigen it has been possible to demonstrate the presence of the serum hepatitis virus in related primates. Chimpanzees, gibbons, and marmosets are all capable of contracting serum hepatitis and developing the Australia antigen. An animal model is now available for the intense study needed to develop vaccines to control this important worldwide viral disease. Hopefully, viral hepatitis will be eradicated, as smallpox, polio, and rubella have been, by modified and attenuated viruses.

REFERENCES

- ¹HIRSCHMAN RJ, SHULMAN NR, BARKER LF, et al.: Virus-like particles in sera of patients with infectious and serum hepatitis. **JAMA** 208-1667-70, 2 Jun 69

(Concluded on Page 112)

Achille De Giovanni (1837-1916); Edoardo Bassini (1844-1924)

While Bassini Revived The Pilgrimage To Padua, DeGiovanni Met A Barrier Of Silence

By Francesco Ronchese, M.D.

The classes graduating in medicine at Padua, Italy, some decades ago decorated the tops of their group pictures with the likenesses of their teachers. It was a good way to keep alive the memories of their six years struggle. The 1917 group (Fig. 1) shows Morgagni in the center, at his right DeGiovanni, the head of medicine, and at his left Bassini, the head of surgery. At their sides were the heads of anatomy, physiology, ophthalmology, dermatology, and so on.

A caricature of DeGiovanni (Fig. 2) from a student publication of the time seems to emphasize his shoulder-length hair.

Bassini is remembered as a tall, bony frame curved over a wooden operating table, and wearing a rubber apron and wooden shoes, standing on a cement floor constantly wet by antiseptic sprays.

While Bassini is a familiar name because of his hernial surgery, De Giovanni is practically unknown in spite of having been an outstanding and beloved teacher for 37 years.

A heart transplant usually receives more acclaim than an equally important discovery in internal medicine. In the case of De Giovanni, one of the reasons of his being unknown outside of Italy is that his theories were fought by his

FRANCESCO RONCHESE, M.D., 170 Waterman Street, Providence, Rhode Island.

colleagues and internist competitors inside of Italy, by the conspiracy of silence, or by ridicule.

Because of the extensive use of body measurements, other university clinics throughout Italy scornfully called the clinic of Padua "the yardstick clinic" (La clinica del metro.)

In 1891 De Giovanni published a three-volume treatise entitled *Morphology of the Human Body*, in which the clinician is conceived of as a biologist who gathers all physiological human characteristics and infers from them specific individual types.

De Giovanni distinguished three constitutional types which he called morphological combinations. Kretschmer in 1921, without mentioning De Giovanni's name or work, called such combinations leptosomic (asthenic), muscular (athletic), and pyknic (stocky or tubby). Later Viola, De Giovanni's pupil and his follower in the chair, reduced these combinations to two types, the microsplanchnic and the megalosplanchnic. Still later, Pende called the combinations the brevilineal and the longilineal. De Giovanni is to be considered a pioneer, a founder of biotypology and its connections to physiology and physiopathology.

Bassini fought in the legions of Garibaldi against the French Zouaves defending the Papal states. He did not reveal his doctor's degree and fought

(Continued on Next Page)

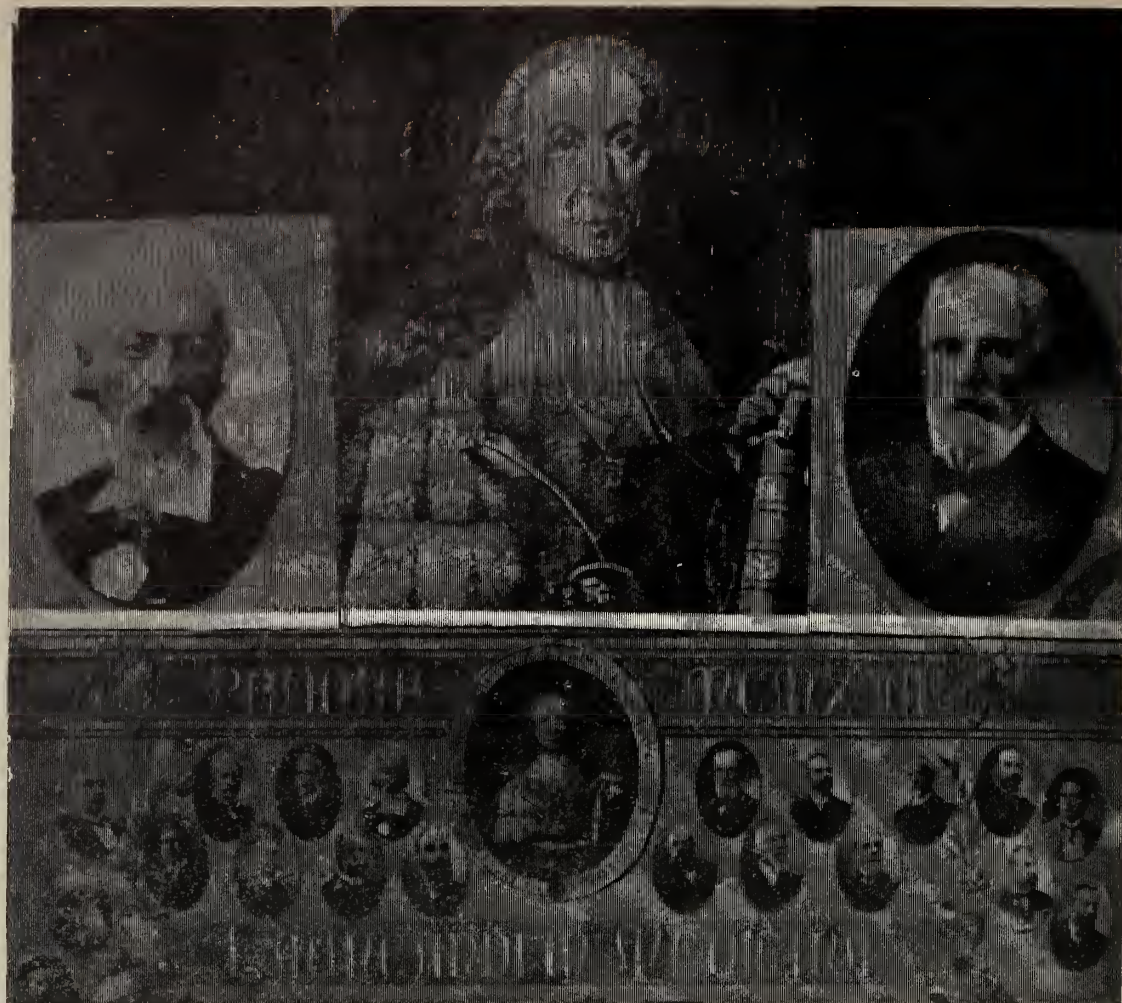


Figure 1



Figure 2

as an infantryman. A bayonet wound in one groin produced a fecal fistula. It gave him much trouble and took years to close. He maintained his dislike of the French all of his life. He was professor of surgery in Padua from 1882 to 1919 (37 years). Up to the time of his epoch-making operation, hernial surgery was still done as it had been centuries before. Thanks to Bassini, surgeons the world over came again to visit Padua in the tradition of Vesalius, Harvey, and Morgagni.

Science writer Jurgen Thorwald brilliantly produces a letter of a young German surgeon visiting

Bassini in 1888. He watched the meticulous shaving of the entire body, the scrubbing with strong soap from the neck to the knees under the inspecting eye of Bassini, unconcerned for the patient's screams, especially when the razor traveled over the area of the hernia. The patient was then wrapped in rubber sheets until operation time the following day. Bassini showed the visitor on a cadaver how the operation would be performed the following morning. To the question of publication of the result, Bassini said that he would publish it only after 200 successful cases.

The year was 1888. He had to publish his paper in Germany in order to have it read throughout the world. Perhaps De Giovanni would have had a better chance of breaking the barrier of silence if he had published his three volumes in Germany.

REFERENCES

- ARCIERI G: Historical hints on public health and social medicine in relation to biotypology. Alcmaeon Editions, New York, 1970.
- ZIMMERMAN LM and HELLER RE: Edoardo Bassini, *Surg Gynec Obstet* 64:971-620, May 1937.
- AUSTONI A: La vita e le opere di Edoardo Bassini, *Arch Ital Chir* 5:591-620, August 1922.
- BASSINI E: Editorial, *JAMA* 204:329-30, April 22 1968.
- THORWALD J: The triumph of surgery, Pantheon Books, New York, 1960 P. 256.
- PAZZINI A: Achille de Giovanni nella genesi dell'idea biotipologica *Pagine Storia Med* 10:12-22, 1966.



Mechanism of the Action of Insulin

Multiple Receptor Theory Appears To Have Superiority Over Concept Of Single Cell Receptor

By Steven H. Baron, A.B.

For the past fifty years the mechanism of the action of insulin has been a paramount question facing scientists and clinicians working in basic and clinical diabetes mellitus research. Although we have learned much about the effects of insulin on metabolic and physiological processes, the mechanism, or mechanisms, by which insulin produces these diverse effects in various tissues is still an enigma.

The purpose of this paper is to discuss various theories purporting to explain insulin action, and to cite supporting experimental evidence, and to present a brief critique of each theory. The final section is devoted to my own analysis of the problem. Because of space, limitations of much valuable information is necessarily omitted.

EFFECTS OF INSULIN

Two important effects of insulin are that it increases in peripheral tissues both the rate of synthesis of glycogen and the rate of glucose oxidation. These facts did not go unrecognized by early investigators; they assumed that insulin acts at some point common to both processes. As Ross explains:

This point can only be at one of two places:

STEVEN H. BARON, A.B., *Department of
Biology, Boston University, Boston, Massachusetts*

A) at the cell membrane, where glucose enters the cell or B) at the only enzyme reaction that occurs before the dichotomy of the glucose pathways, namely the hexokinase reaction.¹

The most prominent theory regarding the hexokinase reaction is the Cori hypothesis, originally proposed in 1946. Basically, the theory states that insulin removes an inhibitor of hexokinase, either an adrenal cortical factor, or anterior pituitary factor, or combinations of the two, in order to allow an increased turnover of glucose to glucose-6-phosphate, from which the processes of glycogen synthesis and glucose oxidation diverge.

The results of Cori's experiments, done in cell-free systems, have not been duplicated by other workers. For instance, Stadie and Haugaard reported that the hexokinase reaction in muscle extracts from diabetic animals failed to show any alteration when compared to normal controls.² On the other hand, experiments designed to show insulin effects on intact tissue have been claimed to be successful. For instance, Villee, White, and Hastings in 1952 alleged that diaphragms from diabetic animals, in a medium containing isomer labelled pyruvate and glucose, showed an increased rate of glycogen synthesis. They concluded that their experiments were "in accord with the hypothesis that its (insulin) primary effect is a stimu-

(Continued on Next Page)

lation of the hexokinase system."²

However, conclusive evidence insofar as insulin controlling this enzyme system is concerned has never been demonstrated; as a result, the theory has lost favor.

MOST POPULAR THEORY

The most popular theory of insulin action has been the cell permeability theory, advocated primarily by Levine and Goldstein. Actually, the idea is not new: Hober, in 1914, hypothesized that diabetes might be caused by a permeability factor controlled by the pancreatic islet secretion.

This theory is essentially a simple one: insulin by some unknown mechanism promotes the intracellular uptake of glucose. The problem—and it is indeed a problem!—is to demonstrate the mechanism by which insulin does this. To date no one has discovered the mechanism, but there has been no dearth of speculation about it.

To cite one scheme, Keston has proposed that an enzyme converts glucose into a lipid-soluble form in the cell membrane, from which a carrier transports this glucose-enzyme complex into the cell. However, the role of insulin in this system is undefined, although it appears that its role is to activate the enzyme.¹ More recently, Rodbell and associates, working with the plasma membrane of fat cells, have suggested "that insulin may cause the transformation of plasma membrane lipoproteins from a laminated to a micellar form."³ In this model insulin is believed to alter the relationship between the protein and lipid components of the membrane.

The permeability theory is based for the most part on solid experimental evidence. In their original work Levine and Goldstein showed that galactose uptake in the eviscerated-nephrectomized animal is increased by insulin. Since galactose is a non-metabolite, uptake cannot be ascribed to an alleged insulin effect upon the hexokinase reaction. Furthermore, these two workers demonstrated that insulin acts on specific hexoses and pentoses.⁴ Other evidence has been supplied by Ross's studies on the rate of penetration and lipid solubility of non-electrolytes. Ross found that glucose was an exception to the generalization that the rate of penetration of a non-electrolyte across the cell membrane is proportional to its lipid solubility. This fact suggests that insulin plays a role in accelerating glucose across the cell barrier. Ross also showed that the effect of insulin on glucose uptake is ten times greater in lenses with intact membranes than with homogenized lens tissue.

As more and more data have accumulated over the years, it has become apparent that the cell permeability theory can no longer explain all the effects of insulin. To illustrate, the theory cannot convincingly explain the dispensability of insulin during muscle contraction. Nor can it explain the insulin effects on the liver, since the hormone does not accelerate glucose uptake in this organ.¹

DECOMPARTMENTATION THEORY

About fifteen years ago Krahl postulated his "decompartmentation" theory to account for all the effects of insulin on muscle.⁵ According to Krahl insulin initiates an intermolecular arrangement of the cell membrane, leading to increased cell permeability. These membrane rearrangements are propagated along the entire cell in order to facilitate metabolic reactions. The results of such an arrangement will, of course, vary from tissue to tissue.

The advantage of this scheme is that it can account for all of the known effects of insulin; its weakness, as Krahl readily admits, is the difficulty of supporting the theory experimentally. It should be noted that any mechanism along this line will have to account for the intimate relationship between connective tissue and muscle, since many physiological effects are not duplicated if the two tissues are separated.

MITOCHONDRION THEORY

An hypothesis localizing the effect of insulin to an organelle, the mitochondrion, has been suggested by Bessman.⁶ In this supposition the major function of insulin is to provide metabolic efficiency by acting as a mechanical bond between the mitochondrion and a specific kinase (hexokinase in muscle, glucokinase in liver), so that the enzyme is brought into close juxtaposition to a site of generation of adenosine triphosphate (ATP).

Two unexplained phenomena are clarified by this proposal. First, since hexokinase has been shown in brain tissue to be attached to large particles, whereas in other tissues it is in soluble form, the dispensability of insulin in this tissue can be explained by suggesting that some other substance is holding hexokinase in brain mitochondria. Second, this theory explains the superfluity of insulin on contracting muscle; in active muscle the creatine kinase system, rather than hexokinase, accepts ATP. More importantly, this model fits the well-known effect of insulin on glycogen synthesis by means of supplying ATP for the phosphorylation of glucose to glucose-6-phosphate, the diverging

point for a number of metabolic pathways, including glycogenesis.

Like the other theories, there are pertinent objections. Despite Bessman's claim that insulin acts intracellularly, there is no direct evidence that insulin is found in the mitochondria of its target tissues. Furthermore, Rodbell's work, utilizing sacs of plasma membranes ("ghosts") and mitochondrial fractions from adipocytes, brings into question the basic premise of this theory. i.e., the role of insulin in providing metabolic efficiency via the mitochondrion. The data reveal that the mitochondrial fraction contained three times as many mitochondria and three times the amount of the enzyme hexokinase as the "ghost" fraction, yet showed one-fifth to one-sixth the glucose oxidation activity as the "ghosts", when both were placed in a physiological medium containing glucose. More revealing is the observation that insulin failed to increase the rate of glucose oxidation in the mitochondrial fraction, yet stimulated an increase of 40 per cent in the rate of glucose oxidation in the "ghost" fraction.³ All of this implies that the cell membrane is essential for insulin action, a premise denied in the theory.

PROTEIN SYNTHESIS

The excellent work of Wool during the past decade has demonstrated an intimate relationship between insulin and the synthesis of muscle protein. As Wool explains:

... the essential and specific effect of insulin on ribosomal protein synthesis is to increase the number of active ribosomes by initiating the formation of a "translation factor" in a process that itself requires protein synthesis but not transcription of DNA.⁷

Other insulinogenic effects, such as glucose uptake (for energy) and amino acid uptake (for raw materials) are, in physiological circumstances, relegated to keeping the synthetic process primed. Wool terms these supportive effects as epiphenomena.

Of paramount importance to this scheme is the identity and role of the "translation factor". Its identity is still unknown.

The postulation of this "translation factor" was necessitated by the following observations. Diabetic animals, treated with insulin one hour prior to sacrifice, manifested normal or near-normal protein production. (In passing, it is of interest that extracts of ribosomes treated with insulin exhibited no increase in protein synthesis.) Further experimentation in diabetic animals, utilizing

cycloheximide (an inhibitor of protein synthesis), demonstrated that those diabetic animals treated with cycloheximide showed similar decreases in protein synthesis when compared to those diabetic animals not treated with the drug. Significantly, diabetic animals treated with cycloheximide *failed* to respond to insulin.

To account for these phenomena Wool proposes that insulin brings about the synthesis of a "translation factor" (presumably a protein) by modulating translation of the messenger RNA of the "factor". In turn, the "factor serves in the modulation of the translation of other species of messenger RNA. Therefore, the effect of insulin in increasing protein synthesis can be accounted for by this unknown factor.

Most of Wool's efforts have gone into determining the chemical and physical properties of the ribosomes, with the hope of inferring the mode of action of the "translation factor". Since diabetic animals lack a normal number of polysomes, and since the administration of insulin causes the formation of polysomes, it appears that the "translation factor" regulates the formation of these units, thereby facilitating protein synthesis.

However, as Wool acknowledges, this theory must be cautiously viewed. For one thing, much of the data can be interpreted in various ways. For another, the theory rests on three unknown entities: the mechanism by which insulin brings about the "translation factor", the nature of the "factor", and the mechanism of action of the "factor".

Although Wool regards production of protein as the primary effect of insulin on muscle, it certainly is no explanation for insulin action on other target organs, such as liver and adipose tissue. Again, we must look elsewhere to find — or attempt to find — a theory which can account for insulinogenic effects in all tissues.

CAMP

During the past ten years, increased intracellular levels of cyclic adenosine monophosphate (CAMP) have been linked with various metabolic processes; these include stimulation of hepatic and muscle glycogenolysis (by means of stimulation of phosphorylase and suppression of glycogen synthetase), and stimulation of lipolysis in adipose tissue.⁸ What makes these observations noteworthy in regard to diabetes is that insulin has an antagonistic effect on these processes.

Thus, the questions arise: Does insulin decrease

(Concluded on Page 111)

Editorials

TRI-STATE RMP: A MEDICAL SCHOOL-HOSPITAL BONANZA?

The Tri-State (New Hampshire, Massachusetts, and Rhode Island) Regional Medical Program was established in 1967 under the auspices of Public Law 89-239, and as such assumed responsibility for promoting improvements in medical care for heart, stroke, and cancer. In August of 1970 the administrative staff, centered in Boston, issued a voluminous report as its application for anniversary review and award.

Since the administrative staff seeks a federal subsidy of \$2,620,961, it is appropriate that one take a long look at what the Regional Medical Program has done, and what it indicates it seeks to do in the coming year.

Operational projects are the following—

I. A comprehensive Inter-University (Boston University, Harvard, and Tufts Medical Schools) Cardiovascular Program in the Department of Health and Hospitals of the City of Boston, basically at Boston City Hospital. The project is stated to be for cardiovascular care of patients of the inner city, that it "demonstrates how the melding of the resources of the three schools towards a common goal has affected the training and patient care at the Boston City Hospital. There is greater access on the part of medical students and residents to both the instructors and patients in the cardiovascular unit. Development of coronary care units has occurred and unification of this service is a reality . . .". To continue this program in 1971 Tri-State would allocate \$307,016 for direct costs, including \$271,277 to pay personnel, presumably medical school faculty and hospital staff salaries.

II. *Expansion and Consolidation of Coronary Care Training at Hanover, N. H.* This project represents a nursing training program in relatively small hospital units in communities beyond direct access to Dartmouth Medical School and its Mary Hitchcock hospital. It is hoped that the project will serve as a model for other training programs in coronary care for nurses in the other states.

Total direct costs for this program are listed at \$36,895, with \$16,661 earmarked for payment to personnel.

III. *Boston University Medical Center Regional Medical Program in Cancer.* The administra-

tive staff cites this project as "an unique demonstration of inter-institutional collaboration." This citation is based on the staff's theory calling for direct involvement of university personnel in the development of sub-regional hospital service and educational facilities, at the same time demonstrating an input of experience and skills of community hospitals to the university medical center. Thus seven participating community, federal, and municipal hospitals participate directly in exchange of information, consultation services, and ward demonstration activities with the Oncology Department at the Boston University Medical Center. For this medical school-hospital exchange of ideas Tri-State will pay \$72,000 in direct services, with \$66,000 of that sum going for personnel services and consultants.

IV. *Diet Counselling Service in Providence, R. I.* Rhode Island's lone project funded by Tri-State is a diet counselling service costing \$39,000 (of which \$35,900 goes for personnel and consultant services) that is sponsored by the Nutrition Council of Rhode Island for non-hospitalized patients upon referral by their physicians, and for public and professional education in nutrition.

V. *St. Luke's Hospital (New Bedford) Stroke Program.* This project utilizes the hospital's comprehensive stroke rehabilitation program to interest and train relevant staff of community hospitals and home health care agencies (in the three state region) in improved rehabilitation services for stroke patients. Just what makes the St. Luke's stroke rehabilitation plan so unusual that staff members from the three state region should go to the Whaling City for the training is not explained by Tri-State in its report. Only \$14,000 is to be appropriated, of which \$10,900 is for personnel.

* * *

One fact is eminently clear in the funding of these initial projects of the Regional Medical Program for New Hampshire, Massachusetts, and Rhode Island.

Medical Schools and their affiliated hospitals are receiving a disproportionate share of the funds.

Eliminating the Rhode Island diet project, which is the only funded program not medical school-

hospital oriented, the other four programs are beneficiaries of \$430,612 in direct costs, of which \$365,911 is allocated for personnel and consultant services, presumably to medical school faculty members and hospital staff personnel.

Equally clear is the fact that all the programs are completely experimental or pilot projects and, unfortunately for the interested reader, the Tri-State analyses do not provide documented evidence as to what substantial contributions they have made to better medical care in the three state region.

The Tri-State staff admits that the medical school and its affiliated hospital have dominated the claims for RMP funds, and it justifies the grants on the basis that school faculties and hospitals have the professional resources to develop programs and finance the developmental costs.

We are inclined to disagree with this philosophy, and argue that Tri-State has a greater responsibility to search out areas where groups do not have the finesse and financial status of the medical school--medical center complex, and to aid such groups and agencies to formulate vital local community programs that will bring about improvements in medical care for heart, stroke, and cancer.

We recognize the cost of research and study, but we feel that allocation of \$469,859 for five experimental projects, with \$395,834 of that money going mainly for medical school-hospital personnel, and

consultant services, requires more explanation than has been presented to date.

And our concern is heightened by the fact that the 40 member administrative staff in the three state region has an annual personnel and consultative service cost of \$1,195,926. The overall annual budget for the three state region of \$2,404,685 has \$1,782,314 earmarked for personnel and administrative services, which seems somewhat top-heavy for the projects reviewed, and for programs that also utilize voluntary unpaid advisory committees in each of the states involved.

We also have reason to be concerned that the RMP in Rhode Island has indicated that it plans to use its staff and resources to further the Neighborhood Health Centers and the AFL-CIO Group Health Association. Both of these projects are already funded and under operation with their own staffs. The Neighborhood Health Centers, with Model Cities grants, and recently a \$194,000 additional OEO grant, hardly appear to be in line for RMP funds also. Group Health Association is a privately operated group that has financial backing from the labor unions, as well as support from a local hospital which is supplying a central facility. Linkage to the Brown University medical sciences program by both of these programs, as noted in the Tri-State report, should not be the influencing factor in meeting their requests for financial or other assistance.

PRESENT STATUS OF SCREENING TEST FOR DONOR-CARRIERS OF VIRAL HEPATITIS*

Intense national interests in the prospect of screening tests suitable for routine use to identify carriers of viral hepatitis has caused the Board of Directors of the American Association of Blood Banks to authorize the publication of this status report. The January-February, 1970, issue of *Transfusion*, official journal of the AABB, presented the "Statement on Laboratory Screening

Tests for Identifying Carriers of Viral Hepatitis in Blood-Banking and Transfusion Services," prepared by a panel of the Committee on Plasma and Plasma Substitutes of the Division of Medical Sciences, National Academy of Sciences — National Research Council. This authoritative statement noted that "... the only laboratory screening test, currently available or proposed, that offers any promise of useful application by blood banking and transfusion services in identifying the long-incubation form of hepatitis in carriers is a test for the presence of Australia antigen in blood." At the time this statement was issued, it was clear that the Australia antigen test was not suitable for general use. The statement pointed out "How-

(Continued on Next Page)

*Since the editorial went to press, it was announced by James H. Pert, M.D., of the New York City Health Department, that a hepatitis test will be ordered soon on all blood collected by the Red Cross and other licensed blood banks throughout New York State. January had been set as the target date for instituting compulsory testing procedures.

Reprinted from the November 1, 1970 issue of the **New York State Journal of Medicine** with the permission of the publishers.

ever, it is clear that the sensitivity and specificity of the test for Australia antigen vary among laboratories, and there is no agreement on the establishment of a uniform test or tests. Such agreement would be essential before any test could be brought into general use." The panel recommended that research be conducted to obtain data from which it would be possible to establish a uniform test. In this regard, the panel noted difficulties and possible hazards with respect to available reference sera. Since the issuance of this statement, considerable literature has been published relating to experience with the test. There has also been a great deal of advertising by various commercial interests, relating to the development of newer technics, or certain tests, or certain sera. This publicity, and numerous conflicting claims, may cause a certain amount of confusion in the minds of blood bankers. The Board therefore has made provision for this status report.

Testing for Australia antigen as a donor-screening test continues to show exciting promise. However, the same problems which were described in the National Research Council statement continue to exist, so that such testing cannot reasonably be performed routinely. It is still necessary that a standard reagent be developed, that it be approved by the Division of Biologics Standards, and that it be available in adequate supply. Until such a serum of uniform controlled potency is developed and approved, such testing must be regarded as experimental, and primarily for purposes of research. Blood banks capable of such research efforts, with adequate facilities, funding, and technical personnel, may wish to engage in such a project, if the individual blood bank finds that it can obtain a constant source of serum, and if it has the capability of producing consistently potent serum for tests. It should be noted that most medium sized or smaller blood banks do not have these capabilities. Even large blood banks may not be able to engage in such research efforts, and others which could do so may find that meeting day-to-day responsibilities precludes such experimentation. The American Association of Blood Banks encourages those blood banks which are able to perform such testing and collection of data to do so, to hasten the development of standard tests which will be suitable for general use. It must

be emphasized that the day of routine testing has not yet arrived.

The Association also urges that blood banks independently evaluate the claims made by commercial interests which suggest that their products or services may be utilized for routine testing for the Australia antigen. The Association is unable to discern sufficient scientific basis for such claims to warrant routine use at this time, although these products or services may be valuable in the research effort.

Those blood banks which are engaged in testing for the Australia antigen may have questions as to the degree to which such testing should be integrated into routine operations of the blood bank. The extent to which such tests are performed will depend both on the resources of the blood bank and on the goals of the project. When this test is performed with respect to a particular unit of blood, it may be possible to withhold release of the unit until the results are known. However, this will depend on the need for blood. In many cases, where large scale testing is being conducted, it will not be possible to hold the blood in the blood bank pending the results. If a positive result is obtained after blood has been released, the hospital should be notified at once, and appropriate measures should be taken so that the attending or treating physicians will be notified if the blood has been transfused.

Blood banks may receive requests for blood which has been tested with negative results. The blood bank's ability to satisfy such demands will depend on individual circumstances. It must be pointed out that it is generally agreed that this screening test will detect only a fraction of all hepatitis carriers. The size of this fraction has varied from investigator to investigator. At the present time, many blood banks will find that they are unable to enter into arrangements routinely to provide blood which has been tested, with negative results, even though the blood bank's particular research effort involves large scale testing.

The American Association of Blood Banks plans to make continuing reports to its membership, and to blood bankers generally, in order that all may be informed as to the status of this or similar tests. It is anticipated that appropriate standards will be promulgated as soon as such tests are available and suitable for general use.

NEW FRAMINGHAM STUDY

Much disappointment was expressed when the Framingham (Massachusetts) Heart Study was terminated after twenty years, a casualty of federal fiscal retrenchment. Friends of that project will be pleased to learn that the National Heart and Lung Institute is conducting a one-year survey in Framingham to determine the frequency of heart attacks and stroke in a general population. The new program, to be called the Framingham Cardiovascular Disease Survey, will collect data on all acute heart attacks, strokes, and other serious clinical manifestations of cardiovascular disease occurring among Framingham inhabitants between June 15, 1970 and July 1, 1971.

The major goals of the study are: 1. To determine the incidence of coronary heart disease and stroke in the general adult population in conjunction with the 1970 census, which provides an accurate basis for such measurements not normally available between census years; and 2. to document events surrounding the acute episode in order to identify if possible, (a) signs and symptoms that might give advance warning of an impending heart attack or stroke; (b) trigger factors that convert a long-term insidious blood-vessel disease into an acute life-threatening illness; and (c) factors operating early in the acute episode that may bear importantly on its outcome.

Local physicians through the Middlesex West Medical Society worked closely with the National Heart and Lung Institute Clinical Applications Program in designing the study plan for the survey. All physicians practicing in Framingham and surrounding communities have been asked to participate by (1) notifying the Framingham Cardiovascular Disease Survey of any heart attack, stroke, or other cardiovascular-disease event observed in their patients during the study period,

and (2) providing certain essential information about the acute episode from their medical records on those patients experiencing such events. This information will be correlated with similar clinical data obtained from the hospital to which the patient is admitted.

Data collected during the survey will be kept confidential and will be disclosed only as part of the statistical summaries of the study findings.

Each patient who has experienced an acute cardiovascular event may upon recommendation of his physician receive at no expense a standardized cardiovascular examination similar to that previously provided every two years to Framingham Heart Study participants. In addition, each patient, members of his family, or relatives and close friends will be interviewed in an attempt to reconstruct as accurately as possible the events preceding and surrounding the acute episode. The interviews are aimed at identifying signs and symptoms indicative of impending heart attacks or strokes and environmental factors instrumental in triggering the acute episode.

Framingham was selected for the survey because of the availability of accumulated data on a sizable portion of the town which participated in the Framingham Heart Study. A comparison of the results of the 20 year longitudinal study with that of the one-year cross-sectional surveys will thus be possible. William B. Kannel, long associated with the Framingham Heart Program as its Director, will serve as Cardiovascular Consultant.

It is encouraging to learn that cardiovascular epidemiological studies are being resumed in Framingham and in the framework of the historic Framingham Heart Study.

Guest Editorial

MEDICAL STUDIES COMMENCE IN HAIFA; PLANNING FOR SCHOOL IN BEER SHEBA BEGUN

Medical education in Israel took a great step forward with the opening of the Medical School of Haifa. At the same time the preparations for a Medical School in the capital of the Negev, Beer Sheba, have reached a practical stage.

These constitute the third and fourth medical schools in Israel after the long established Hebrew University—Hadassah Hospital Medical Center in Jerusalem and the newer Tel Aviv school,

(Continued on Next Page)

university affiliated and based at Beilinson Hospital in Petah, Tikva and the nearby Tel Hashomer Government Hospital, both in the suburbs of Tel Aviv.

In Haifa the Fourth Year of medical studies was opened with 42 medical students who had completed their first three years abroad.

With the opening of the course, the head of the Medical School, Prof. David Erlik, noted that the matter of the new school being attached to an established academic institution was still under discussion and that for the meantime its operation and educational standards would be supervised by a higher academic commission composed of professors and teachers of institutions of higher education elsewhere in the country.

The Medical School in Haifa is named after the well known ex-Mayor of Haifa, the late Mr. Abba Khoushy, who worked for many years to have such a school established.

The new students were chosen from among 109 applicants who had been studying abroad, mainly in Italy, France, Belgium, Switzerland, and Austria. They were interviewed overseas by Doctor E. Bental who was sent by the Municipality of Haifa to the European universities in order to investigate the needs and potential of the students preparatory to their possible integration in a medical school in Haifa. Of the accepted candidates 35 are male and 7 female. Nineteen of the students are Haifa residents, three come from the northern part of Israel, and the remainder from other sections of the country. Their Fourth Year syllabus includes pathological microbiology, clinical biochemistry, and the introduction to clinical subjects among other subjects.

For this year the School is housed in the buildings of the Ramban (Maimonides) Government Hospital and clinical instruction will be given both in the Ramban and the Rothschild Hospitals. In the former hospital clinical instruction for Fifth Year students has already been given for the past six years to medical students of the Medical School of the Hebrew University in Jerusalem.

The budget for this year of studies totals 700,000 Israeli pounds, all of which has been guaranteed by the Municipality of Haifa. Professor Erlik expressed his hope that the citizens of Haifa would donate funds to establish scholarships and for the other needs of the medical school.

Next year students will be accepted for the

Fourth and Fifth Years—that is, those who will complete their Fourth Year in Haifa will be able to carry on, but only in three years time will instruction for First Year students begin.

Doctor Varda May-Tal, the coordinator of studies, said that 30 part-time lecturers will teach in the school and there will also be a team of 12 scientists.

In Beer Sheba discussions are being held between the University of the Negev and the Central Committee of Kupat Holim (the Sick Fund) concerning the establishment of a medical school in the capital of the Negev. Representatives of each of these bodies have already reached agreement regarding the planning of such a school, which will be based at the Central Hospital of the Negev situated in Beer Sheba and run by Kupat Holim.

The planning committee will be made up of prominent persons in Israel and abroad. The head of the medical department of Kupat Holim, Doctor Doron, who is a resident of Beer Sheba, has been in touch with Professor Charles Kleeman of the University of California, who will head the planning committee. Professor Kleeman visited Israel recently and discussed at length the problems connected with the establishment of a medical school in the Negev as well as the basic matters of medical education in Israel connected with the setting up of such an institution. Professor Kleeman agreed to be head of the Planning Commission and will provide the Government with a detailed outline during the first half of 1970.

Kupat Holim intends to invest about 35 million Israeli pounds over the next four or five years in order to expand their hospital in Beer Sheba and make it a suitable University Hospital while at the same time enlarging its capacity to 800 beds.

On several occasions the Prime Minister, Mrs. Golda Meir, has expressed her support for the establishment of a medical school in the Negev, and Mr. Yigael Allon, the Deputy Prime Minister, said at the opening of the Academic Year of the University of the Negev that he also supports all academic progress in the area and the establishment of a medical school.

These schools will go a long way toward making Israel self-sufficient in medical education.

Adapted from the Jan.-April 1970 issue of The Quarterly Review of the Israel Medical Association Overseas Fellowship.

INFORMATION OVERLOAD

The masses of medical information available to physicians from medical texts and journals, meetings, and the daily mail today overwhelm the most conscientious reader. It limits us all to specialist status. To borrow a phrase from the computer programmers, it seems that we suffer from information input overload. That we have survived to practice medicine, however, implies some degree of accommodation among us. Doctor James Miller of the University of Michigan some years ago offered an analysis that bears repeating of how accommodation to input overload is secured. He listed eight responses to overload that constitute an inevitable strategy. Omission heads the list; nobody can read everything. But some information is important even when there isn't time to secure it. It must wait in queues — the pile of marked journals on the desk. Filtering is the technique of priority rating. This reading now, the rest waits for the

weekend. Approximation has to do with skimming the abstracts or glancing at a summary. Error as response to overload stress is certainly not sought, but clearly must occur. Multiple channeling requires other people to pick up some of the load — the route to specialization and consultation. Chunking designates the gulping of large chunks of information — the speed reading method. Finally, escape looks to withdrawal from the contest no one wins — a vacation, the second career recommended by Wilder Penfield, or retirement.

With these eight possible responses to the stress of "too much" we construct our professional equipment. It is well that we look at them together, for each response has a loss factor. If choice is possible, we may minimize our losses and maximize our gains by an appropriate and varying selection among these alternatives.



DIABETES SYMPOSIUM PLANNED FOR MARCH 24

The Clinical Diabetes Association of Rhode Island will sponsor a symposium on "Lipid Metabolism and Diabetes Mellitus", to be held at the Miriam Hospital on the afternoon of Wednesday, March 24.

Speakers listed to address the meeting are Dr. Robert Lees of the Department of Nutrition of Massachusetts Institute of Technology, Dr. Donald Martin, Director of the Diabetes Research Unit of the Massachusetts General Hospital, and Dr. John N. Fain, of the Division of Medical Sciences at Brown University.

Doctor Lees will speak on "The Effects of Hormones on Lipoprotein Metabolism"; Doctor Martin's subject will be "The Effects of Hormones on Fat Cell Metabolism"; Doctor Fain will discuss "The Effects of Tolbutamide on Lipid Metabolism".

The meeting is open to all physicians in the State. A program announcement will be mailed prior to the meeting, but this early report is published that members may reserve the date in advance for this important meeting.

ALCOHOLISM—A REVIEW AND OVERVIEW OF THE PROBLEM

(Continued From Page 83)

alcoholism becomes multidisciplinary. By the time the alcoholic asks for help, he is physically, psychologically, vocationally, financially, socially, and spiritually bankrupt. The overwhelming challenge of attempting to put this shell of a person back together demands the united efforts of all the facilities a community can muster. That no one treatment (excluding A.A.) regimen is superior to another has been repeatedly demonstrated. Our present percentage recovery rate is alarmingly low, and the incidence of recurrence frustratingly high. Unfortunately, the majority of those patients treated for alcoholism today are disproportionately drawn from that segment of the alcoholic population that is most difficult to handle. Where the occasional program has been successful, we see the physician, the psychiatrist (or psychologist), the nurse, the clergyman, the attorney, the probation officer, Alcoholics Anonymous, and various government agencies working together in harmony. This is Utopian in concept, expensive in practice, and assumes a smoothly operating referral system. Yet it is not unrealistic. It does involve, however, a community's wholehearted support and careful planning.

This multidisciplinary rehabilitative effort embraces the philosophy that a progressive continuum of treatment is the most efficacious. A community's effort would see not only the acceptance of the alcoholic in a hospital setting but the development of clinics, day hospitals, halfway houses, recovery farms, and possibly rehabilitation or addiction centers. The personality structure of the alcoholic is not so radically different from that of other patients with different symptomatology that any ill person requiring rehabilitation couldn't benefit from the same chain of treatment services.

The most critical issue, however, is how to reach the majority, where the physical and psychosocial impairment is not severe and where there is still workable motivation. Unfortunately, there is a decided tendency in the middle and upper classes to hide and protect their drinking fellow members who are in trouble with alcohol. This inclination is unconsciously supported by the physician, the family, and the employer. Not until the disease process is well under way, not until an individual's drinking behavior becomes threatening, does it become mandatory that the stricken

member receive help. This constitutes the revealing of a problem that sometimes embarrasses the peer group who now find it necessary to remove the sick member from the scene. If and when he recovers, he never again quite qualifies for active reintegration in said group as a non-drinking member. Such is the impact of alcohol on our society.

Obviously, to reach the majority referred to above, we should look to the one individual who most frequently encounters the prodromata and early phases of alcoholism. This person is the physician who is in the unique position to diagnose and offer help when the prognosis is the most favorable. Sadly, however, the medical community has not escaped the harmful influence of prejudice. During the active days of the temperance movement, physicians joined the ranks of the avoiders in the Wet-Dry conflict; — and here the preponderance remain. There are bursts of microscopic change, but as a general rule physicians' attitudes are negative. Not until alcoholism appears in the curriculum of medical schools across the country will we find appropriate response to alcoholics on the part of doctors. It is interesting; a case of systemic lupus erythematosus (SLE) will attract the curiosity and prime attention of interns and residents, yet a chronic alcoholic, with just as many systems involved and eligible for top priority on any medical service, is shunned. In incipient DTs, with liver, pancreas, myocardial, and central nervous system pathology, to say nothing of disturbed electrolytes and other chemical abnormalities, the alcoholic may wait interminably in emergency rooms and on waiting lists literally begging for help. Ambivalence, ignorance, bias, have all made him an outcast.

I am sure that the heart of the matter today of the hostility between physicians and hospital personnel and the alcoholic resides in the patient's extreme sensitivity to the attitudes and responses of others, and particularly to negative attitudes. By the time an alcoholic reaches the point of hospitalization, he has encountered the spectrum of moralizing, sermonizing, rejection, contempt, and disdain. He has been repeatedly told in a variety of ways that he is spineless and weak-willed, that he has "brought this on himself." He has been almost continuously reminded of his problem by angry and accusatory family, relatives, friends, employers, judges, and others important in his de-

(Continued on Page 103)

(Continued from Page 102)

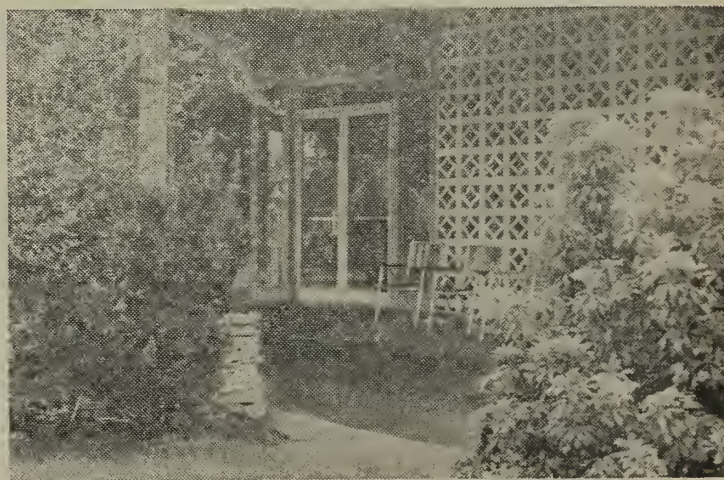
A discussion of treatment is not complete without a comment on wives and families of the alcoholic. Alcoholism is a family illness with the spouse and the children, and/or close relatives intimately involved in the disease process. We have but to scrutinize the divorce statistics and the histories of emotionally disturbed adolescents for confirmation. The abuse of alcohol as a causal factor is significantly high.

A final, less conventional word about treatment is timely. Many of us now are willing to concede that total abstinence as a goal has been overemphasized and is sometimes maintained to

Several aspects of treatment appear in this symposium on alcoholism. Being personally acquainted with the facilities and technics employed, distinct essentials become apparent that account for the success of any program. Four principles appear to govern favorable outcome: (1) Successful rehabilitation demands the cooperation of the various disciplines involved in the patient's care; (2) Most patients must be in some form of treatment indefinitely; (3) The treatment approach must be tailored to the individual; and (4) The

(Continued on Next Page)

**A Participating Extended Care Facility
In Federal Medicare**



Physiotherapist

Ethically Managed

East Providence

Tel. 438-4275

JCAH Accredited

treatment philosophy of choice would appear to be ego support rather than ego dissection.

CONCLUSION

Whether or not the established physician of today will be able to adjust to the gradual emergence of a new health care system remains to be seen. Society and a bureaucratic governmental complex are demanding and effecting changes that will see a new philosophy of medical care and a new physician image. We of the "establishment," of the private sector, will have to make compromises and concessions and modify our thinking if we are to function effectively in a market that will find us competing with other health professionals differently trained. The challenge today is not how to stem the tide of the social revolution in medicine, but how to adapt in order to maintain leadership.

Private practice is changing in that we are seeing an increasing number of emotional problems — in all age groups — and more psychophysiological disturbances. Harassed and overworked

as the practitioner is, he has forgotten, or doesn't take time to listen. Offices, clinics, and emergency rooms are filled with troubled people, and we are dictating rather than listening and establishing productive doctor-patient relationships. There are not enough psychiatrists to treat these people, and, if there were, I question that this is what our emotionally sick society needs. *All* of us, no matter what the specialty, are going to have to recall that technic of the art of the practice of medicine. We must again become humanitarians and exhibit that empathy with which we are traditionally endowed. An attentive, intuitive ear, a sympathetic shoulder, emotional support, and sincere reassurance are effective therapies. Those physicians who "do not have the time" to establish that kind of rapport are not rendering total service to their patients.

The Seventies will find us drifting from the age of anxiety to the decade of depression. Man will increasingly look for ways to relieve his psychic pain. The incidence of drug abuse and alcoholism will continue to climb. Surely we have reached the stage in the evolution of alcoholism where the physician has to stop "protecting" his patient. We have supported the denial mechanism and dishonesty of alcoholics to the extent that our afflicted patients now are literally scared to reveal their problems to us and are seeking help wherever they can find it. We physicians must change our attitudes. All of us are going to have to get involved, for these people need help. And no one — and I don't care how many degrees in sociology, theology, and psychology he possesses — is better equipped to handle the alcoholic than the physician. But to procure comprehensive care, the doctor must be willing to become part of a multidisciplinary team. Although he may qualify for a leadership role, he must acknowledge the need for the service of other professionals and work cooperatively with them.

Through the eyes of the alcoholic, the physician will slowly gain a different perspective of what is transpiring in the world of the impoverished. He then can't help but be better prepared to face community health issues and the addiction problem that will soon overwhelm us.



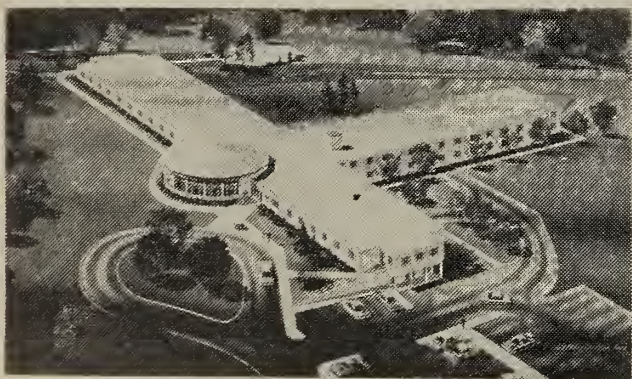
ONE SENTENCE ESSAY

Everything I like is either illegal or immoral, pollutes the environment, or increases the population. . . . Anon.

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

PRESSURES ON THE AMERICAN PHYSICIAN

(Continued From Page 78)

ment officials. All anticipated that those few unresolved issues remaining would easily be worked out to the complete satisfaction of all concerned parties. After the election, a civil servant of government wrote a medical care act which was passed by the new government. This new act completely disregarded the tenor of previous physician-government negotiations. This new law stated that Quebec doctors must practice under its provisions, or not at all, even to agreeing to the ridiculously low fee schedule which set the cost of a house call below that charged by a TV repairman. These fees were set by a 13-member government commission, only 2 of whom were physicians. All doctors, specialists and generalists alike, had to abide equally and completely by this fee schedule. All physicians had to agree to abide by standards of medical practice set by this same 13-member commission. After a specified date, all doctors refusing to participate were subject to a fine of \$200-\$500 a day, and the two medical syndicates to which the offending physicians belonged were sub-

ject to a fine from \$5,000 to \$50,000 until full capitulation was achieved. Quebec physicians vainly attempted to renegotiate with the government but had to deal with the same arrogant civil servant who had authored the law. His repeated manner of response to the doctors' attempts at negotiation was to stand up, stonily cast a copy of the law upon the table, and state, "this is the law, obey it!" I believe that the elected politicians of Quebec have been successful in intervening between the civil servant negotiator and the physicians and that certain modifications in the law have been effected. Without this, certainly many Quebec physicians were contemplating moving to other provinces of Canada or even considering the United States, although uneasily.

In the United States over the past 7 to 8 years it has become fashionable for government health planners, sociologists, and newspaper medical specialists to roast by disparagement American medical care by dwelling on the statement that infant mortality in this country exceeds that of many other nations. The Providence Sunday Journal, July 23, 1967, contained this statement:

(Continued on Next Page)



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN**
Model 423

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION**

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

"A baby born in the United States has less chance of survival than in 17 other countries. This shocking statistic makes abundantly clear the hollowness of the frequently heard claim that this country has the best medical care in the world"; and the Providence Evening Bulletin, December 18, 1970, stated: "Fourteen nations have lower infant mortality rates which are generally regarded as the best indicators of the overall quality of health care in a society." In 1963 a news release from HEW stated that the U. S. slipped from 10th to 11th place in infant mortality rates among 15 countries and that even the state of Utah, which had the lowest rate, had an infant death rate 33 per cent higher than the Netherlands and Sweden. An associate director in the NIH in 1970 wrote that "the infant mortality rate of the United States, the richest country of the world, ranks 13th among the countries with reasonably reliable data. Such high rates indicate that the health of mothers and babies in this country is needlessly and grossly jeopardized."

Although there have been a number of answering releases from medical sources, medical journal editorials, and qualifying statements by the United States Public Health Service, mysteriously none of these has had widespread secular publicity nor circulation. Doctor Clement Smith of Harvard in the April 1968 issue of *Pediatrics* raised the question as to whether it is at all logical or realistic to believe that the United States could achieve the same levels of neonatal, perinatal, or even infant mortality as obtained in Sweden. Is it realistic to expect that this sprawling heterogeneous melting pot of humanity that is America with its diverse cultural, social, economic, ethnic, and racial admixtures could achieve as low an infant death rate as Sweden, whose size is slightly larger than California but smaller than Texas, and whose population is about nine million as compared to over two hundred million in the United States; Sweden, moreover, has not been involved in a war nor subjected to a significant immigration for over one hundred years, while the United States has been involved in two major wars and several interminable non-wars. Sweden, in contrast to the United States, has low socio-economic differentials, a stable government highly attuned to a sophisticated, enlightened, well-educated public with widespread sex education and a low birth rate. The wide availability of legalized therapeutic abortion has been estimated reliably by Swedish sociologists as approaching a rate of 50 per 1000 live births. When

we remember that abortion is beamed at the high risk pregnancy whose product is often doomed to become a mortality statistic and that the mortality for the fetus is 100 per cent in abortion but is not counted in infant mortality statistics, doesn't logic begin to whisper that comparability is just not possible?

In Rhode Island, 70 per cent of infant deaths occur in the first week of life and 72 per cent of these are low birth weight babies weighing less than 5½ lbs. Low birth weight babies have a 20 times higher mortality than the over 5½ lb. baby. In the United States the incidence of these babies has been increasing since 1950 from 7 to 10 per cent, while in Sweden the incidence has remained a stable 5 per cent for a number of years. This increased incidence of low birth weight babies, the United States Public Health Service admits, may well account for about 85 to 90 per cent of the observed difference in neonatal mortality between Sweden and this country.

If the system of medical care was the most significant factor in explaining the differential in infant mortality rates between the United States and those nations with state controlled medicine, why is it that in England and Wales, after two decades of universal medical care, the socio-economic differentials in infant mortality have not been eliminated but have actually widened?

Why is it not interesting to United States newspaper medical writers that the United States has the lowest fetal death rate among all nations? Is it perhaps because fetal deaths are not counted in infant mortality statistics, thus providing the biased opportunity to downgrade American medicine? I do not wish my remarks to invite complacency. I have no intention of shrugging off the challenge of our current mortality statistics. I wish merely to invite clarity of thought in delineating the complex variables that are woven into this vexing problem. Only by this means will we be able to enlist all the required local talents, energies, and cooperative understanding of the entire community into an effective effort for improvement. Carping, biased statements, and goading innuendoes by the government planners and the press merely tend to defer understanding and prevent effective action.

Medical academia supplies subtle pressure on the practicing physician, but it can provide, at times, a bit of heat. Mostly, however, the pressure is in the form of a stimulating tonic, elevating standards of diagnosis and treatment, and review-

(Continued on Next Page)

Ulcer Re- lief!

Dicarbosil®

ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

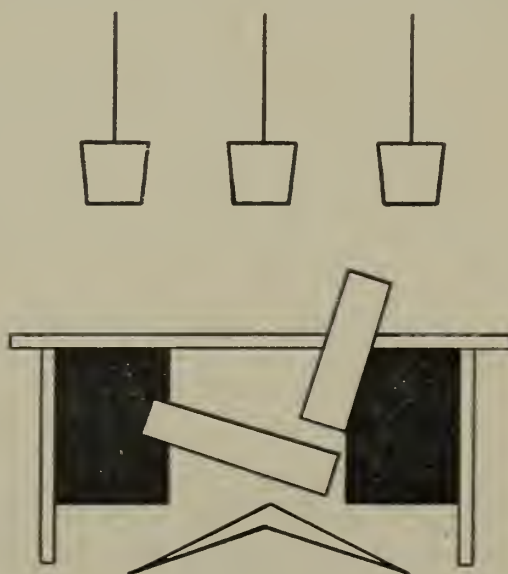


ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

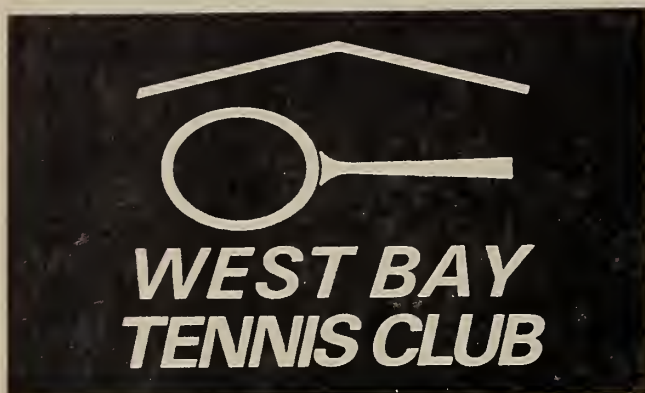
36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

OPEN TO ALL
PLAYING TIME STILL AVAILABLE



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

or write Box 387

Warwick, R. I.

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

Tel: — 831-4833

Providence, Rhode Island

ing or advancing new or modified concepts in techniques. It provides an environment enriched by logic, systematic organization, documentation, and clarity of elucidation. This is a nostalgic luxury for the harried practitioner. It is academia that supplies the backbone for most national, regional, and local postgraduate courses, seminars, scientific exhibits, and special presentations throughout America in all specialties and subspecialties. It is academia that contributes most to the current biomedical literature by the dissemination of new findings and by contributing to medical progress. Medical practitioners along with concerned laymen are therefore hopeful that academic medicine will be able to help with the design of an effective and practicable system in the delivery of superior medical care for all Americans. We applaud their current efforts in experimental programs involving education and training of students from the disadvantaged sectors of society, who may be better able to relate to the health problems and needs of this group of Americans. Programs to train paramedical personnel to take over the tasks just as easily and effectively performed by nondoctors to ease the physician shortage promise to be a stimulating challenge to the practitioner, as well as to the consumer. Not all programs designed by academia have been howling successes, but we should expect better results as academic medicine becomes more comfortable in the humble, hurly-burly market place of community medical practice. The change in curricula, so fashionable throughout the nation, is bound to exert some extra pressure on medical practitioners who serve as part-time faculty, or perhaps on those occasions when they must come to the aid of a young doctor who has never been exposed to the birth of a baby. Medical practitioners in this community hold their academic colleagues in high esteem, and most of us found the statement to the contrary in a recent series of newspaper articles on Rhode Island medicine a tactless, irresponsible and petulantly malicious example of newspaper writing.

But, we should not allow ourselves to become too upset. An internist colleague remarked to me the other day that newspaper medical specialists are probably the cause of more myocardial infarctions among physicians than any other known factor, including snow storms. He has amassed an unusual statistical correlation of the incidence of coronary attacks among doctors with the appearance of a particular newspaper man's medical pronouncements. And let us not be so

paranoid as to believe that we are the first generation of doctors to be reviled, ridiculed, and restricted, nor the first to be pressured, sued, and badgered. The first recorded suit by a patient to recover cost for a poor operative result from circumcision was described in archeological findings dating back to 4000 B.C. The Code Hammurabi of Summerian and Oriental medicine in 2250 B.C. established physicians' fees and provided that, if a physician caused a freeman to lose his life or his eye, he must have his hands cut off. If the same misfortune befell a slave patient the physician merely had to render value for value. The Chinese in 600 B.C. instituted medical examinations and assessed a doctor's work at year's end as a method of fixing his salary. Aristophanes, in the time of Hippocrates, the father of Medicine, referred to physicians as lazy, long haired, foppish individuals with rings and carefully polished nails. In the Byzantine period, the time of the collapse of the Roman empire, the physician was described as a mercenary parasite and a vendor of quackery. In medieval times, the general practice of surgery was conducted by barbers, bath keepers, and charlatans. In Prussia, up to the time of Frederick the Great, it was the surgeon's duty to shave the officers of the line. Doctors from the 12th to the 14th century were satirized and ridiculed for the rings on their fingers, tall horses, golden spurs, gorgeous clothes, and pompous airs. The practicing physician in the 17th century was described as a sterile pedant and coxcomb, red-heeled, long-robed, big-wigged, square-bonneted, pompous, and disdainful in manner, making a vain parade of his Latin, and, instead of studying and caring for his patients, trying to overawe them by long tirades of technical dribble which only concealed his ignorance of what he supposed to be their diseases. In American colonial days, medical legislation, like the code Hammurabi, was primarily concerned with the control of fees. Even in the 19th century, the time of Laennec, Cheyne-Stokes, Corrigan, Bright, Addison, Hodgkin, Parkinson, Semmelweis, and Holmes, the public's attitude was one of amused tolerance, although generally respectful. Frequent satirizations of physicians, however, were to be seen in the secular literature.

Thus, through recorded history, there have been laws to control, punish, and even replace doctors. We have seen physicians in most periods of history and in most cultures satirized for their pomposity and wealth; yet today the practice of American

(Concluded on Next Page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

The New England Region of

THE AMERICAN ACADEMY OF ORAL MEDICINE

In cooperation with

BROWN UNIVERSITY

Division of Biological and Medical Sciences

will present a Mid-Annual Meeting of
Continuing Scientific Education

on

Internal Medicine and Oral Hygiene

in Wilson Hall 102, Center Campus at
Brown University

Sunday, March 28, 1971
2 - 5:30 p.m.

All Physicians, House Staff, and medical students are invited to attend. Speakers include Charles V. Caldarone, D.M.D., Milton W. Hamolsky, M.D., Alfred W. Senft, M.D., Rudolph W. Pearson, M.D., A. A. Savastano, M.D., Charles J. MacDonald, M.D., and Howard Ward, D.D.S., M.D.

Dinner reservations can be made with Doctor Caldarone, 392 Angell Street, Providence.

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street
Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

Medicine is still sound, vigorous, lucrative, and popular.

Of course, this is a heated time for Medicine. It is a heated time for almost all traditional institutions whether medical, political, social, cultural, or economic. Harry Truman once said, "If you don't like the heat, stay out of the kitchen". Well, there's a lot of work to be done. If medical practice is to be changed, we the purveyors of medical services must be among the chief cooks. Roll up your sleeves — stay in the kitchen; the heat is on.



DELEGATE'S REPORT ON THE SECOND NATIONAL CONFERENCE OF STATE MEDICAL ASSOCIATION REPRESENTATIVES ON CONTINUING MEDICAL EDUCATION

(Concluded From Page 65)

any university or teaching institution in bringing continuing medical education to the profession, rather it supplements it. There are those in the rank and file of practice that regard the State Society as less threatening than a "group of university professors." The time-honored method, however, of providing continuing medical education once a year in the form of a scientific program at the State Society meeting is being evaluated practically by lessened attendance at these meetings all over the country; therefore, continuing medical education must be brought to the physician in the community in which he practices and must be made pertinent and palatable.

I think that this conference is well worth our continued attendance as a committee.

Howard S. Browne, M.D.



AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM
Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

MECHANISM OF THE ACTION OF INSULIN

(Concluded From Page 95)

intracellular levels of CAMP? And, furthermore, is CAMP implicated in other insulinogenic effects, such as glucose uptake? At present the answer to the former is nebulous. Although glucagon and epinephrine have been shown to work via CAMP in stimulating glycogenolysis, the mechanism by which insulin antagonizes this effect is unknown. Data from experiments designed to elucidate this problem have been contradictory. It has been suggested, however, that these contradictions may be caused by differences in assay methodology of adenylyl cyclase and phosphodiesterase, enzymes involved in the production and degradation of CAMP levels⁸. In regards to the latter question, one insulinogenic effect, increased glucose uptake, has been shown to be independent CAMP levels⁸. Thus, to extrapolate from this information, it does not appear that CAMP can be linked with all insulin effects.

It appears certain that CAMP plays an important role in both carbohydrate and fat metabolism, both processes in which abnormalities occur during insulin deficiency. The link between CAMP and insulin in these pathways is imprecisely known. On the other hand, other processes associated with insulin, such as glucose uptake, appear to be independent of CAMP action. CAMP is not, in all probability, the link — if such a link exists — between insulin and all its effects.

MULTIPLE RECEPTOR THEORY

We have examined a number of theories of insulin action, each presupposing a primary effect on the cell. It is apparent that none of these theories by itself can account for all of the effects of insulin; furthermore, the effects of insulin in at least one organ, the liver, are still conjectural. The problem is best summarized by Reiser:

The cardinal question now before us is whether the idea of a single receptor in the cell should be abandoned in favor of the view that the hormone interacts directly with multiple receptors in a given cell and that it has multiple mechanisms of action in different target cells.⁹

A resolution of this problem was suggested by Roth. According to his theory, insulin forms a complex with a receptor site in the cell membrane, which activates a messenger substance, which in turn stimulates various processes to produce those effects attributed to insulin. To support this idea,

Roth cites the fact that ACTH, a polypeptide hormone as is insulin, works in such a manner. (Jessie Roth, M.D., National Institute of Arthritis and Metabolic Diseases: personal communication.)

Despite the attractiveness of such a scheme, many problems arise. Foremost is the identity of the messenger itself (if of course it exists). The mechanism by which the messenger itself regulates the metabolic and physiologic processes attributed to insulin is another matter.

The theory of insulin action that is seemingly the most logical and rational is based for the most part upon speculation. This peculiarity indicates the present state of the problem.

As Doctor Wool has commented: "If you shoot an arrow into the wall and draw a circle around it, you have hit the bull's-eye."

* * *

The author wishes to acknowledge the guidance of Professor I. A. Macchi, Department of Biology, Boston University, Boston, Mass., in preparing this paper.

REFERENCES

- ¹ROSS EJ: The "permeability" hypothesis of the action of insulin. **Medicine** 35:355-388, Dec 56
- ²STADIE WC: Current concepts of the action of insulin. **Physiol Rev** 34:52-100, Jan 54
- ³RODBELL M, JONES AB, CHIAPPE de CINGOLANI GE et al.: The actions of insulin and catabolic hormones on the plasma membrane of the fat cells. **Recent Progr Hormone Res** 24:215-254, 1968
- ⁴LEVINE R, GOLDSTEIN MS: On the mechanism of action of insulin. **Recent Progr Hormone Res** 11:343-380, 1955
- ⁵KRAHL ME: The action of insulin on cells New York, Academic Press, 1960, p. 180
- ⁶BESSMAN SP: A molecular basis for the mechanism of insulin action. **Amer J Med** 40:740-749, May 66
- ⁷WOOL IG, STIREWALT WS, KURIHARA K, et al.: Mode of action of insulin in the regulation of protein biosynthesis in muscle. **Recent Progr Hormone Res** 24:139-213, 1968.
- ⁸SUTHERLAND EW, ROBISON GA: The role of cyclic AMP in the control of carbohydrate metabolism. **Diabetes** 18:797-819, Dec 69
- ⁹RIESER P: **Insulin, membranes, and metabolism**. Baltimore, Williams & Wilkins, 1967, p. xii



PROVIDENCE MEDICAL ASSOCIATION

(Continued From Page 62)

Donald, Associate Professor of Medical Science at Brown University, and head of the Department of Dermatology at Roger Williams Hospital, who spoke on "New Approaches to Community Health".

In his talk entitled "New Approaches to Community Health" (Concluded on Next Page)

munity Health", Dr. Charles J. MacDonald impressed his audience with the need for the improvement of medical care delivery in the disadvantaged sections of our city. He described the efforts now being made by Progress for Providence at the Community Health Centers under the able and inspiring direction of Father Giudice.

While there is ample room for skepticism when one hears that our national infant mortality rate is not as good as in many other countries, there is no doubt that statistics are valid which point out that infant mortality is deplorably lower in some sections of Providence as compared to others.

Dr. MacDonald stated that something new had to be added to the health care delivery system in the areas having a high infant mortality. The Community Health Centers were organized as that something new. The invitation to Dr. MacDonald to appear as a speaker reflects the sincere parallel concern of the Providence Medical Association and its desire to cooperate with the Health Centers, against a background of improved communication which has recently developed.

The basic problem was touched upon by several comments from the audience which emphasized the numbers of repeaters at the Health Centers,

coming in with the same problems time and again. This would indicate that the Health Centers are an accommodation to local community standards which are different from those in other areas. This observation does not mean that the Health Centers are not a good idea and are not needed. Perhaps efforts along these lines should even be redoubled. But, this observation does mean that unless the social, economic, and educational standards of these areas are upgraded, the Health Centers will ever function as a "palliation", while the "cure" which can come about only through the efforts of the entire society will continue to elude us.

ADJOURNMENT

The meeting was adjourned at 10:30 p.m.

Respectfully submitted:

JOSEPH E. CARUOLO, M.D.
Secretary

Collation was served.

Attendance: 48.

WASHINGTON SCENE

(Concluded from Page 72)

area or for a nonprofit organization after graduation.

—The Developmental Disabilities Services and Facilities Construction Amendments of 1970 extending the mental retardation facilities construction program for three years and expanding it to include grants for planning, provision of services, and construction and operation of facilities for persons with developmental disabilities. Authorized appropriations total \$295 million.

AUSTRALIA ANTIGEN AND VIRAL HEPATITIS

(Concluded From Page 90)

- ²KRUGMAN S: Etiology of viral hepatitis. **Hosp Pract** 5:45-49, Mar 70
- ³BLUMBERG BS, MELARTIN L: Australia antigen and hepatitis. Studies in asymptomatic people and lepromatous leprosy patient. **Arch Intern Med** (Chicago) 125:287-92, Feb 70
- ⁴ZUCKERMAN AJ: Viral hepatitis and the Australia-SH antigen. **Nature** 223:569-72, 9 Aug 69
- ⁵GILES JP, McCOLLUM RW, BERNDTSON LW Jr., et al.: Relation of Australia-SH antigen to the willowbrook MS-2 strain. **New Eng J Med** 281: 119-22, 17 Jul 69
- ⁶SHULMAN NR, BARKER LF: Virus-like antigen, antibody, and antigen-antibody complexes in hepatitis measured by complement fixation. **Science** 165: 304-6, 18 Jul 69
- ⁷BLUMBERG BS: Polymorphisms of the serum proteins and the development of iso-precipitins in transfused patients. **Bull NY Acad Med** 40:377-86, May 64

\$100,000

ESTATE **\$233⁰⁰**
FOR ONLY At age 30!

This plan is one of the lowest net-cost life insurance plans in America. Rates at other ages are equally phenomenal.

A level term policy written in minimums of \$100,000 (and no maximums), this plan is designed for the man who needs a larger amount of life insurance at the lowest possible cost.

The plan is written for ages 20 through 65, is renewable to age 70 and may be converted to a permanent plan prior to age 65 without a physical examination.

SBL

Security Benefit Life Insurance Company
700 Harrison, Topeka, Kansas 66603

Financial Security Corporation
Cumberland Professional Building
2180 Mendon Road
Cumberland, Rhode Island 02864
726-2371 726-2370

Please send additional information about your remarkable low-cost insurance plan.

Name

Address

City

State

Zip

RHODE ISLAND MEDICAL JOURNAL

| | |
|---|-----|
| THE ORGANIZATION AND DELIVERY OF HEALTH SERVICES IN RHODE ISLAND John T. Tierney | 139 |
| A COMPARATIVE STUDY OF THE TREATMENT OF FRACTURES OF THE SHAFT OF THE FEMUR BY TRACTION AND OPEN FIXATION A. A. Savastano, M.D. and Eusebio Cadena, M.D. | 144 |
| ACUTE PERFORATION IN REGIONAL ENTERITIS Robert Gorfine, M.D. | 147 |
| NEEDLE BIOPSY OF LIVER: AN APPRAISAL Arturo Longobardi, M.D. | 149 |
| EFFECT OF THE PREOPERATIVE INGESTION OF VITAMIN K ON PROTHROMBIN Francis B. Sargent, M.D., Richard F. Judkins, M.D., Vittal T. Pai, M.D., and Joseph P. Bellino, M.D. | 151 |
| Progress Notes: RECENT DEVELOPMENTS IN LASER TECHNOLOGY OF INTEREST TO THE PRACTITIONER Leon Goldman, M.D. | 153 |
| Masters in Medicine: FOOTNOTE TO MEDICAL HISTORY: BOERHAAVE, BRETT, AND WATERHOUSE Robert V. Lewis, M.D. | 157 |
| EDITORIALS | 159 |
| BOOK REVIEWS | 133 |
| DERMAQUIZ | 168 |
| DISTRICT MEDICAL SOCIETY MEETINGS | 127 |
| EDITOR'S MAILBOX | 165 |
| HOUSE OF DELEGATES REPORT | 117 |
| PERIPATETICS | 165 |
| WASHINGTON SCENE | 129 |

COVER: Keynoting Dr. Goodman's article in this issue is a direct photograph of a laser beam illustrating the unique constructive and destructive interferences (rings) characteristic of this kind of coherent light . . . courtesy of Prof. Hendrik Gerritsen, Brown University.

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASST MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



Robert V. Lewis, M.D., Chairman

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

John A. Dillon, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year. Second-Class postage at Providence, Rhode Island. Copyright, 1970.

House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of January 20, 1971

A meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, January 20, 1971. The meeting was called to order by the Vice Speaker of the House, Dr. John Ham, at 3:05 p.m.

The following members of the House were in attendance: Drs. David Newhall, Carl V. Anderson, Robert E. Baute, Harold L. Beddoe, William J. O'Rourke, John C. Osenkowski, Charles B. Round, Frederick Peirce, Jr., Richard G. Bertini, David R. Hallmann, Earl J. Mara, F. Bruno Agnelli, James A. McGrath, Joseph L. C. Ruisi, Leonard S. Staudinger, J. Gerald Lamoureux, Richard P. Sexton, Jeannette E. Vidal, William J. MacDonald, Stephen J. Hoyer, John T. Barrett, Bertram H. Buxton, Jr., Joseph E. Caruolo, Francis P. Catanzaro, Nathan Chaset, Dominic L. Copolino, John A. Dillon, Joseph D. DiMase, Herbert Ebner, Martin E. Felder, David Freedman, Frank Giunta, Herbert F. Hager, Milton W. Hamolsky, Thomas F. Head, John B. Lawlor, Robert V. Lewis, Henry M. Litchman, Thomas R. Littleton, Vincent I. MacAndrew, Peter Mathieu, Frank Merlino, Anthony J. Migliaccio, Gustavo A. Motta, Raul Nodarse, Ralph F. Pike, James A. Reeves, Robert P. Sarni, George H. Taft, William R. Thompson, Elihu S. Wing, Jr., Seebert J. Goldowsky, Edmund T. Hackman, and Arnold Porter.

Also present were Dr. Henry Uhl, Chairman of the Committee on Continuing Medical Education, John E. Farrell, Executive Secretary, and Edward J. Lynch, Assistant Executive Secretary.

Members absent were: Drs. John J. Cunningham, Charles S. Dotterer, Robert Hayes, Paul J. M. Healey, Francis L. Scarpaci, John P. Grady, Stanley D. Simon, George V. Coleman, Joseph L. Dowling, Frank P. Duffy, Alvin G. Gendreau, James B. Moran, and Joseph E. Cannon.

MINUTES OF PREVIOUS MEETING

Doctor Hoyer reported that the minutes of the previous meeting of the House had been prepared and distributed to the members of the House, and printed in the Rhode Island Medical Journal.

Action: A motion was made, seconded and voted that the minutes of the September 23, 1970 meeting of the House, as published, be approved and placed on record.

REPORT OF THE SECRETARY

Doctor Hoyer, Secretary, noted that his report of the actions taken by the Council was included in the handbook for the meeting, and he would omit reading the report unless there was a request that he do so. He offered to answer questions regarding any item in the report.

Action: A motion was made, seconded and voted that the report of the Secretary, as submitted in the handbook, be approved and placed on record.

REPORT OF TRUSTEES OF THE MEDICAL LIBRARY

Dr. Jeannette E. Vidal, Chairman of the Board of Trustees of the Rhode Island Medical Society Library, noted that the Trustees' report was included in the handbook for the meeting.

Action: A motion was made, seconded and voted that the report of the Board of Trustees of the Medical Library, as submitted, be approved and placed on file.

REPORT OF THE TREASURER

In the absence of Dr. John P. Grady, Treasurer, the report of the Treasurer was briefly reviewed by John E. Farrell, Executive Secretary.

Action: A motion was made, seconded and voted that the report of the Treasurer, as submitted in the handbook for the meeting, be approved and placed on file.

REPORT ON BENEVOLENCE FUND

The Vice Speaker noted that the annual financial report had been prepared and distributed to the members of the House.

(Continued on Page 121)

Guide his hand to quality and economy

Specify
Deltasone[®] 5 mg.
(prednisone, Upjohn)

an economical
prednisone
that's made
a name for itself

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001





Picture of low back pain

Parafon Forte tablets help to relieve pain,
restore mobility... stop pain-spasm feedback

... why. PARAFON FORTE provides:

Salicylate analgesic equal to aspirin for relief of pain, yet unlikely to cause the gastric irritation^{2,3} or increased bleeding time⁴ associated with aspirin therapy.

Skeletal muscle relaxant shown in extensive clinical studies to be useful in a variety of low back disorders⁵⁻⁷ which is not an antihistamine or tranquilizer derivative and is unlikely to produce a tranquilizing or sedative effect.⁸

Describe PARAFON FORTE for effective spasmolysis and relief of pain in acute sprains, strains and myalgias of the low back, including acute exacerbations of chronic conditions. Your patients will appreciate the restored comfort and freedom of movement it usually provides.

McNEIL

McNEIL LABORATORIES, INC., FT. WASHINGTON, PA. 19034



treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

Contraindications: Sensitivity to either component. **Warnings:** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. **Precautions:** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. **Adverse Reactions:** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. **Usual Adult Dosage:** Two tablets q.i.d. **Supplied:** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: *Fed. Proc.* 14:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: *The Pharmacological Basis of Therapeutics*, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: *Gastroint. Endosc.* 14:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: *New Engl. J. Med.* 282:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: *Industr. Med. Surg.* 21:372, 1962. 6. Forster, S., et al.: *Amer. J. Orthop.* 2:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: *Clin. Pharmacol. Ther.* 5:871, 1964.

*U.S. PATENT NO. 2,895,877

HOUSE OF DELEGATES REPORT

(Continued from Page 117)

cial report of the Trustees of the Benevolence Fund was included in the handbook for the information of the House.

Action: A motion was made, seconded and voted that the report of the Trustees of the Benevolence Fund, as submitted, be received and placed on record..

RECOMMENDATIONS OF THE COUNCIL

Dr. Stephen J. Hoyer, Secretary, presented the following recommendations of the Council to the House:

1. *Spring Meeting of the House*

The Council recommends that the House of Delegates meet on Wednesday, March 24, 1971 in order that its business may be completed before the annual meeting on April 24, 1971; and further, that the House take this action as a waiver of the bylaws requirement that there be a House meeting in April of each year.

Action: A motion was made, seconded and voted that the recommendation be adopted.

2. *Blue Cross Directors*

The Council nominates as the Society's representatives on the Blue Cross Board of Directors, for 1971, Doctors Earl J. Mara and Arnold Porter.

Action: A motion was made, seconded and voted that Drs. Arnold Porter and Earl J. Mara be the Society's representatives on the Blue Cross Board.

3. *Physicians Service Directors*

The Council nominates for 3-year terms each of the following physicians to serve on the Board of Directors of Physicians Service:

Paul Barber, M.D. (Kent)

Seebert J. Goldowsky, M.D. (Prov.)

Robert V. Lewis, M.D. (Prov.)

Leonard S. Staudinger, M.D. (Woon.)

The nomination of Dr. Thomas Head was made from the floor of the House.

Action: On a written ballot the House nominated Drs. Paul E. Barber, Seebert J. Goldowsky, Robert V. Lewis, and Leonard S. Staudinger.

4. *Claude E. Welch, M.D. (Boston) as AMA President-elect*

The Council, noting that Dr. Claude E.

Welch of Boston,, an outstanding surgeon who is widely-known, has been nominated by the Massachusetts delegation as nominee for the office of President-elect of the American Medical Association, recommends to the House of Delegates that it record the support of Rhode Island for his election.

Action: A motion was made, seconded and voted that the House approve the recommendation.

5. *Physician Fee Profiles*

Whereas the fee profiles secured from members of the Society in 1967 are obsolete, and have no value, the Council recommends that the House approve of the destruction of these profiles which are currently stored at the medical library.

Action: A motion was made, seconded and voted that the House adopt the recommendation in the following amended form:

Whereas the fee profiles secured from members of the Society in 1967 are obsolete, and have no value, the House approves of the destruction of these profiles which are currently stored at the medical library.

6. *Rare Book Room at the Medical Library*

In view of the long, devoted and outstanding service to the membership by Mrs. Helen DeJong, Librarian of the Society, the Council unanimously recommends to the House that it approve of the naming of the newly-created rare book room the HELEN DEJONG RARE BOOK ROOM, and further, that an appropriate tablet or other marking be erected to so identify the room.

Action: A motion was made, seconded and unanimously adopted that the recommendation of the Council be approved.

PROFESSIONAL ADVISORY COMMITTEE OF PHYSICIANS SERVICE

The Vice Speaker noted that the handbook included the regulations for the election of members of the Professional Advisory Committee of Physicians Service. He stated that bylaws provide that the House shall elect three members, and he called for nominations.

Action: A motion was made, seconded and voted that Drs. J. Robert Bowen, John F. W. Gilman, and John P. Grady be reelected to be the Society's official representatives on the Pro-

(Continued on Page 124)

...in the presence of spasm or hypermotility,
gas distension and discomfort, **KINESED®**
provides more complete relief:

☐ belladonna alkaloids — for the hyper-
active bowel ☐ simethicone — for ac-
companying distension and pain due to
gas ☐ phenobarbital — for associated
anxiety and tension

Composition: Each chewable, fruit-flavored, scored tab-
let contains: 16 mg. phenobarbital (warning: may be
habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg.
atropine sulfate; 0.007 mg. scopolamine hydrobromide;
40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or

belladonna alkaloids, glaucoma, advanced renal or he-
patic disease.

Precautions: Administer with caution to patients with
incipient glaucoma, bladder neck obstruction or uri-
nary bladder atony. Prolonged use of barbiturates may
be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and
other atropine-like side effects may occur at high doses,
but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times
daily. Dosage can be adjusted depending on diagnosis
and severity of symptoms. Children 2 to 12 years: One
half or one tablet three or four times daily. Tablets may
be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek kinetikos,
to move,
and the Latin sedatus,
to calm)

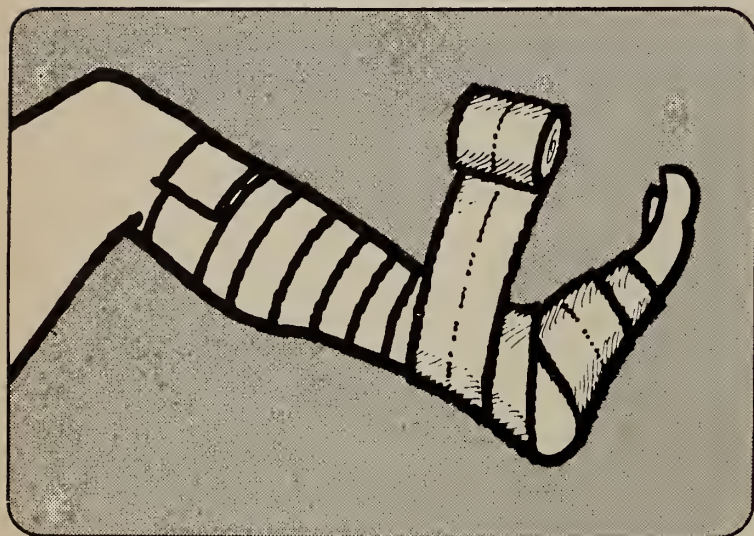
KINESED®

antispasmodic/sedative/antiflatulent

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.

A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage
and FLEXOPLAST elastic adhesive
bandage.

Name M.D.

Address

City

State Zip

HOUSE OF DELEGATES REPORT

(Continued from Page 122)

Professional Advisory Committee of Physicians
Service for 1971.

REPORT OF DELEGATE TO THE A M A

Dr. Edmund T. Hackman, Delegate to the American Medical Association's House of Delegates, gave an oral summary of the highlights of the AMA House at its clinical session in Boston in December, 1970. He noted that the AMA News, and also the R. I. Medical Journal, had carried detailed reports of the meeting.

In his presentation he reported on actions involving group and solo practice, programs for continuing medical education for physicians, changes in medical curricula, the action taken on the abortion problem, the issues involved in the Bennett amendment, intern membership in the AMA, licensure of health occupations, and the appointment of a national task force on licensure issues.

REPORT OF MENTAL HEALTH COMMITTEE

The Vice Speaker noted that the report of the Mental Health Committee was included in the handbook, and it contained a resolution for House consideration. Members of the House discussed the resolution and expressed the opinion that it warranted clarification.

Action: A motion was made, seconded and voted that the first three paragraphs of the committee report be approved, but that the resolution in the report be referred back to the committee for clarification.

RESOLUTION RELATIVE TO TV LIQUOR ADS

The House voted to approve the following resolution:

Be It Resolved that the House of Delegates of the Rhode Island Medical Society, assembled in meeting on this 20th day of January, 1971, express strong opposition to the use of television and radio for the advertising of liquor, a substance potentially dangerous to the health and welfare of the individual and the family; and *be it further resolved* that a copy of this resolution be forwarded to the National Association of Broadcasters, and to United States Senator, John O. Pastore of Rhode Island.

ABORTION LEGISLATION

Dr. Bertram H. Buxton, Jr., Chairman of the Society's Committee on Perinatal Mortality, and a member of the Maternal Health Committee also, presented a preliminary legislative draft that incorporated the position on abortion as approved by the House of Delegates at its September, 1970, meeting. He read the draft of the legislation which had been developed with advice of legal counsel, and he answered questions regarding it. He stated that the Committees felt that the Society's position should be publicly established, and that the legislation should be introduced as the Society's bill.

and that additions to it by legislators affecting the medical provisions enunciated not be accepted.

The proposed draft was discussed by members of the House.

Action: A motion was made and seconded that the proposed legislative draft on abortion be approved.

A roll call vote with members voting either "Yes", "No", or "Abstain" was requested.

Action: On the roll call vote 23 members voted "Yes", 9 members, "No", and 7 members, "Abstain".

The Vice Speaker declared the motion carried.

COMMITTEE ON CONTINUING MEDICAL EDUCATION

Dr. Henry Uhl, Chairman of the Society's Committee on Continuing Medical Education, discussed the work of this new committee, and he also reviewed recommendations made by the Committee to the House.

Members of the House urged that the Committee consider the inclusion of general practice departments in each of the general hospitals in the State.

Action: A motion was made, seconded and voted that the House approved of the following recommendations submitted by the Committee on Continuing Medical Education:

1. The Committee on Continuing Medical Education, having diligently studied the problem of mandatory attendance at Continuing Medical Education meetings, records itself in opposition to any negative incentives in continuing medical education, such as mandatory attendance as a requirement for membership in a state medical society, and recommends that this House of Delegates authorize that the Committee on Continuing Medical Education explore positive incentives in continuing medical education, such as the Problem Oriented Medical Record System and self-assessment approaches such as the Bi-Cycle Concept.
2. That the House of Delegates authorize the Committee on Continuing Medical Education to review national problems concerning recertification and relicensure of physicians.
3. That this House of Delegates approve of the establishment of a seminar on continuing medical education sponsored by the Rhode Island Medical Society opened to its entire membership.

MEDIATION COMMITTEE

Due to the absence of Dr. Nathan Chaset, Chairman of the Mediation Committee, who had to leave the meeting, John E. Farrell reported briefly

for the Committee. He stated that there was concern regarding possible increases in the malpractice insurance rates, and therefore the Society is requesting an opportunity to discuss the issue with the state insurance commissioner.

PHYSICIANS SERVICE

Dr. Arnold Porter, President of Physicians Service, reported briefly on an action taken within the week by the Board of Directors relative to a necessary rate increase for the 65 Plan due to the increases in the past three years of the Medicare program while the Corporation's plan has maintained the same premium charge. He stated that reserves of the 65 Plan would be depleted this year, and therefore the rate filing was necessary to aid and protect the elder citizens.

COMMITTEE REPORTS

On separate actions the House voted to receive and place on record reports published in the handbook that had been received from the Committees on Highway Safety, Nutrition and Metabolism, Library, Medical Aspects of Sports, and Hospital-Physician Relations.

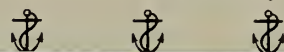
ADJOURNMENT

The House was adjourned at 5:20 p.m.

Respectfully submitted:

STEPHEN J. HOYE, M.D.

Secretary



\$100,000
ESTATE **\$233⁰⁰**
FOR ONLY At age 30!

This plan is one of the lowest net-cost life insurance plans in America. Rates at other ages are equally phenomenal.

A level term policy written in minimums of \$100,000 (and no maximums), this plan is designed for the man who needs a larger amount of life insurance at the lowest possible cost.

The plan is written for ages 20 through 65, is renewable to age 70 and may be converted to a permanent plan prior to age 65 without a physical examination.

SBL

Security Benefit Life Insurance Company
700 Harrison, Topeka, Kansas 66603

Financial Security Corporation
Cumberland Professional Building
2180 Mendon Road
Cumberland, Rhode Island 02864
726-2371 726-2370

Please send additional information about your remarkable low-cost insurance plan.

Name

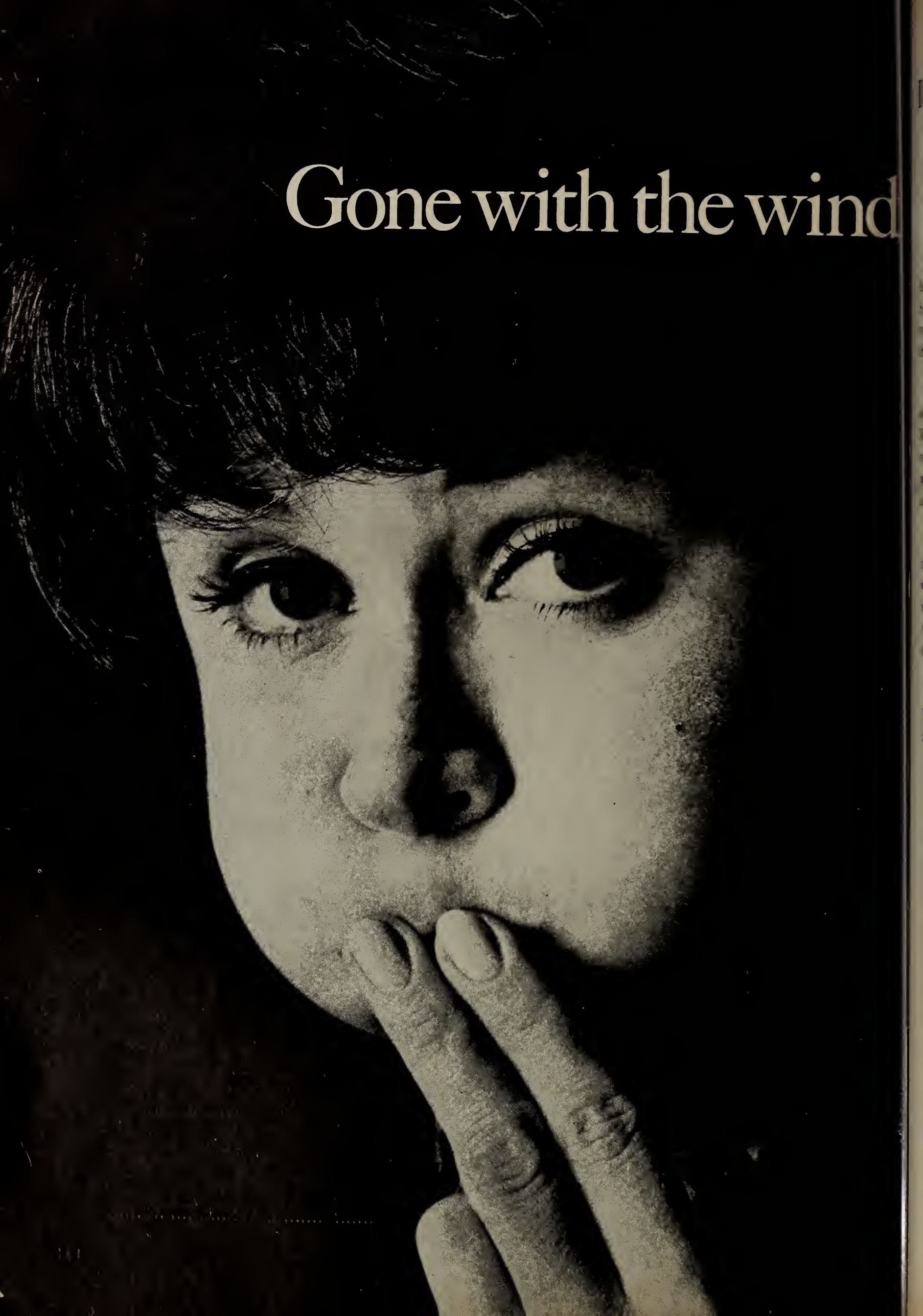
Address

City

State

Zip

Gone with the wind



District Medical Society Meetings

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library in Providence, on Monday, February 1, 1971. The meeting was called to order by the President, Dr. David Freedman, at 8:35 p.m.

MINUTES OF PREVIOUS MEETING

Doctor Freedman announced that he had named of the January meeting would be published in the Rhode Island Medical Journal, and therefore a reading of them would be omitted, unless there was a request for such a reading. There was not a request.

REPORT OF THE PRESIDENT

Doctor Freedman announced that he had named committees to serve in 1971, and that the members would be notified. He expressed his thanks to all who will serve in carrying forward the work of the Association through committee activity in the coming months.

* * *

He awarded membership certificates to Dr. Roberto V. Castaneda who had been elected to active membership at the January meeting.

SCIENTIFIC PROGRAM

Doctor Freedman introduced the guest speaker, Dr. H. Richard Nesson, Acting physician-in-chief, Beth Israel Hospital in Boston, and Assistant Professor of Medicine at Harvard Medical School, who spoke on "The Harvard Community Health Plan: A New Delivery Model." In his address, Doctor Nesson stressed that the Harvard Community Health Plan represented *a* model of delivery of health care and *not* the model. Doctor Nesson first brought out the evidence which exists that there is need for variations in delivery of health care. He then went on to state that this is a non-profit corporation which has focused upon pre-paid, group practice stressing increased utilization of the principle of ambulatory care to provide as comprehensive care as possible in order to build a system capable of existing in the "real world." He related in a concise, easily understandable way the manner in which computers are and can be utilized, the value of such utilization, and the constant ongoing program to increase further

their scope in the management of practice. He also covered other subjects such as — the physical set-up, utilization of nurses and other allied medical personnel, the education of the patient, and the part such a program will play in the education of future physicians.

The question and answer period was both provocative and educational. The answers Doctor Nesson gave were honest, concise, and clear. All in all it was a most enjoyable evening. The only sad note is that such an important contemporary period when practicing physicians should and *must* become more adequately informed on such a vital subject that there were not more members present.

ADJOURNMENT

The meeting was adjourned at 10:05 p.m.

Respectfully submitted:

THOMAS F. HEAD, M.D.
Secretary

Collation was served.

Attendance: 42

WOONSOCKET DISTRICT MEDICAL SOCIETY

A special session of the Woonsocket District Medical Society was held on Monday, February 1, 1971, at the meeting hall of Fogarty Hospital at 11:30 a.m. prior to the regular quarterly staff meeting. President Wilfrid V. Ethier presided.

Dr. Leland W. Jones, President of the Rhode Island Heart Association, addressed the meeting regarding a pilot project of preventive medicine the association is attempting to implement.

Doctor Jones indicated that inasmuch as Rhode Island leads the nation in cardiovascular deaths, that fact alone is reason enough for the inception of a mass screening project which will point out potential cardiovascular cases.

The Heart Association pilot project, which is to be run in conjunction with a team of technicians from Warner-Chilcott Laboratories, utilizes a trailer unit which would be set up at a large industrial or commercial plant. The employees are given a multiphasic type of exam which for the most part is scaled for cardiovascular disease detection.

(Continued on Next Page)

Hopkins

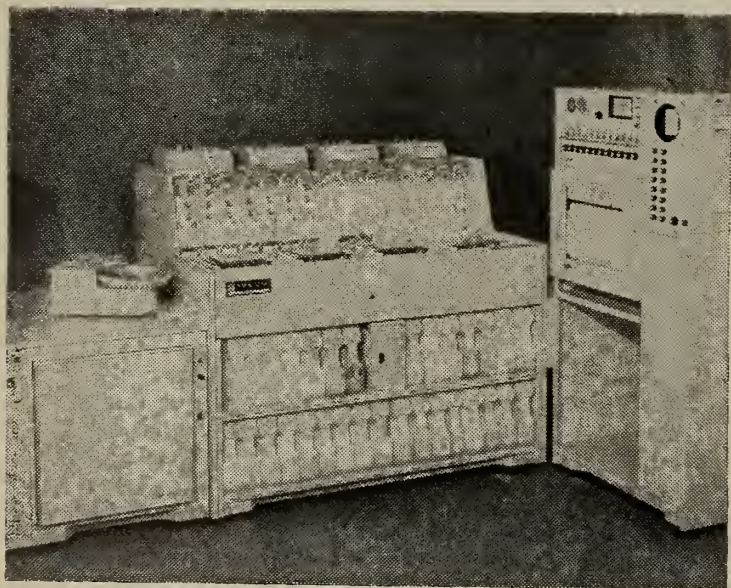
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

Each individual undergoes such tests as EKG, blood pressure, obesity, and certain laboratory analyses such as cholesterol level determination. In addition, a basic history of the individual is taken. Through these tests it is possible to assign an individual to any one of a number of cardiovascular risk categories.

All information developed from this multiphasic test program is confidential. The individual's private physician is notified of the result. In this way, any positive results of the test can be immediately followed through.

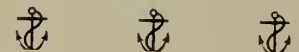
Doctor Jones stated that whereas most industrial firms have as a basic policy a screening process for their executives, such as an obligatory annual physical exam, the average white collar and blue collar worker does not. While the test program does not replace an annual physical, it does provide the information that will detect a susceptibility or potentiality towards cardiovascular problems, he said.

The cost of the pilot project is being absorbed by the Heart Association. Doctor Jones said that should the results of the project be significant, further expansion of the plan would be considered. The implementation of such a plan on a wide scale would provide the average Rhode Islander with one of the best preventive care techniques available.

The medical society also received a request from Mrs. Ernest Smith of Burrillville, asking that the society endorse a pilot project for the initiation of a comprehensive health educational program as part of the regular school curriculum in grades 1 through 12 of that town's schools. The society gave its full support to both Doctor Jones' and Mrs. Smith's projects.

Respectfully submitted:

ALTON P. THOMAS, M.D.
Secretary



TWO SENTENCE ESSAY

VITAMIN C AND THE COMMON COLD

It seems to be more than coincidence that the W. H. Freeman and Company, publishers of Doctor Linus Paulings' new book "Vitamin C and the Common Cold" are also in the drug manufacturing business. One of their products is ascorbic acid (Vitamin C).

. . . Courtesy Worcester Medical News, Jan. 1971

The Washington Scene

A Summary Report Prepared By The Washington Office Of The American Medical Association



President Nixon promised that every effort will be made to keep bureaucracy at a minimum in connection with his new overall national health program even before he disclosed its details.

"... We do not want the doctors and those in the medical profession to be smothered under a whole, huge bureaucracy and under a great pile of government forms," he said in a speech at the 20th annual meeting of the American College of Cardiology prior to his acceptance of the college's 1971 Humanitarian Award.

Nixon said he recognized that there is no program for medical care that would be good for the patient unless it is supported by physicians and has the cooperation of the medical profession.

"So we want your advice, we want your cooperation, we want to work together with you in developing a program that will do what is needed to be done and do the best for our patients, your patients, but also that will enable you to meet your responsibilities as unhampered as is possible by federal bureaucracy, red tape and the like," he said.

"That is our objective and I will simply say ... that as this debate goes on through the year that I know that we will have your cooperation.

"I know the dedicated men and women that are in this profession. And I can assure you that we will listen. We want your advice because, as I said in the state of the union message, we have one great goal."

In the state of the union message, the President said:

"As a fourth great goal, I will offer a far-reaching set of proposals for improving America's health care and making it available more fairly to more people.

"I will propose:

"A program to insure that no American family will be prevented from obtaining basic medical care by inability to pay.

"I will propose a major increase in and redirec-

tion of aid to medical schools, to greatly increase the number of doctors and other health personnel.

"Incentives to improve the delivery of health services, to get more medical care resources into those areas that have not been adequately served, to make greater use of medical assistants and to slow the alarming rise in the costs of medical care.

"New programs to encourage better preventive medicine, by attacking the causes of disease and injury, and by providing incentives to doctors to keep people well rather than just to treat them when they are sick.

"I will also ask for an appropriation of an extra \$100-million to launch an intensive campaign to find a cure for cancer, and I will ask later for whatever additional funds can effectively be used. The time has come in America when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease. Let us make a total national commitment to achieve this goal.

"America has long been the wealthiest nation in the world. Now it is time we became the healthiest nation in the world."

In his budget message, Nixon said he later would send to Congress a message "that will set out a national health strategy for the seventies and propose significant changes in the federal role in the nation's system of health care."

"This strategy will seek to expand preventive care, to train more doctors and other health personnel, to achieve greater equity and efficiency in the delivery of health services," he said. "It will include a new health insurance program for all low-income families with children."

* * *

The Nixon Administration asked Congress for tighter government control over any peer review setup for medicare and medicaid than would be provided by the so-called Bennett amendment approved by the Senate last year.

(Continued on Next Page)

Masters In Medicine

**Achille De Giovanni
(1837-1916);
Edoardo Bassini (1844-1924)**

*While Bassini Revived The Pilgrimage
To Padua, DeGiovanni Met A Barrier
Of Silence*

By Francesco Ronchese, M.D.

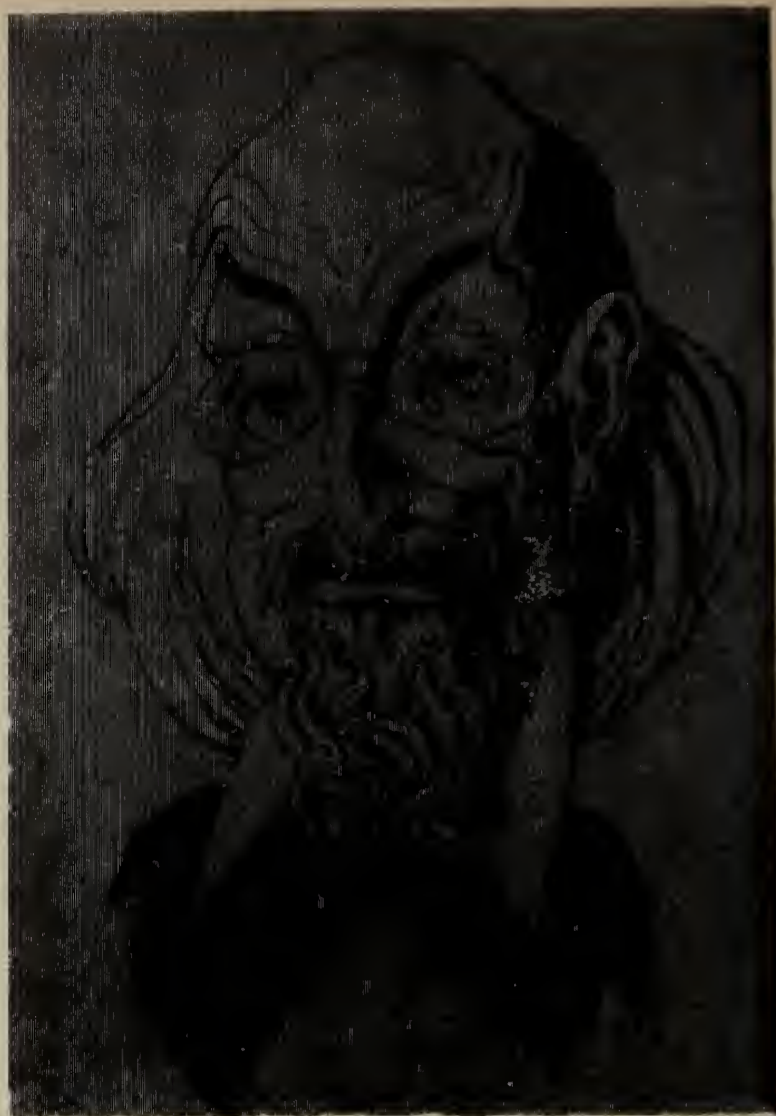


Figure 2



Elliot L. Richardson, secretary of Health, Education and Welfare, told the House Ways and Means Committee:

"We agree with the objective of assuring an expanded role for the medical profession in peer review activities and recognize the need for improvement of utilization review procedures. However, certain modifications in the senate provisions would be desirable. For example, we do not think that the secretary of HEW should be required to use medical-society sponsored groups in situations where there may be a highly qualified review organization in the area that has already demonstrated its ability to perform well. We also favor giving the secretary some greater flexibility to permit, through regulations, variations in the structure and patterns of operation of peer review groups."

Richardson was testifying on H.R. 1 of the 92nd Congress. The social security measure includes provisions for peer review and other changes in medicare and medicaid. Both chambers of Congress passed such legislation last year but the Senate added so many amendments to the House passed bill that congressional leaders decided it would be futile for a house-senate conference committee to try to reconcile the differences. The

House committee made the legislation the first order of business this year and the legislation was expected to get through Congress within a few months.

Richardson again asked for authority to use health maintenance organizations (HMO's), or prepaid group practice, for the government programs. He also renewed a request for authority to limit physicians' fees and other provider costs under medicare. Both provisions were approved in varying forms by the House and Senate last year, and consequently it appeared likely that some versions of them, along with peer review, would become law in the first half of this year.

Richardson said HMO's would mean progress toward "our goal of emphasizing preventive medical care." He added:

"We believe that HMO's can help solve many of the problems facing the health care system today — the uncontrolled rise in health care costs, over-utilization, particularly of high cost services, disorganization, improper allocation of resources, inadequate emphasis on preventive care and inefficient use of available health manpower. In the long run, the encouragement of HMO's may be the most important step we can take to stimulate

the restructuring of the health delivery system. We hope that health maintenance organizations, and their use by beneficiaries, will expand greatly in the future, and we believe that there can be significant long-run savings in program costs due to the HMO option."

Concerning the proposed limitation on increases in physicians' fees, Richardson said:

"Another major change relating to medicare reimbursement that is recommended by the Administration is one which would limit medicare's recognition of prevailing charge increases to rates that economic data indicate would be fair to all concerned. We believe that if recognition of fee increases is tied to appropriate economic indexes, this will help to assure that the recognition of such increases is appropriately related to developments in other pertinent sectors of the economy."

Administration sources said HEW later would seek authority for other economy measures to cut medicare costs. These included:

—Reduction of the 60-day period of hospitalization during which beneficiaries pay relatively little.

—Increase the annual \$50 deductible a beneficiary must pay toward his physician's fees under Part B.

—Tighten up on payments to nursing homes for custodial care.

The American Nursing Home Association already has withdrawn official support of the medicare program for extended care and has urged its more than 7,000 nursing home members to reassess their participation.

"The tragic aspect of the medicare program for extended care is that the Social Security Administration led America's senior citizens to believe that, if their physicians thought it necessary, they were entitled to 100 days of custodial care at government expense," David R. Mosher, ANHA president, said. "Subsequent rules and regulations issued by SSA have virtually ruled this out."

* * *

A National Commission on VD (Venereal Disease) has been formed to alert the public to the dangers of gonorrhea and syphilis which now afflict an estimated more than 2 million Americans.

Dr. Bruce Webster, New York City, president of the American Social Health Association, was named chairman of the commission which was created by the Department of Health, Education and Welfare to consider the problems of syphilis and

(Continued on Next Page)

Taste!

Dicarbosil®

ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Therapy,
Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

gonorrhea from a national standpoint, study ways of bringing public health and private medicine into closer working relationship, and make recommendation for bringing the two diseases under control.

The commission, in seeking to define a national strategy for the better control of the venereal diseases, will submit its recommendations to the various professional groups represented on the commission, as well as to HEW.

Dr. Roger O. Egeberg, HEW assistant secretary for Health and Scientific Affairs, designated the Center for Disease Control, Atlanta, to provide staff support for the commission.

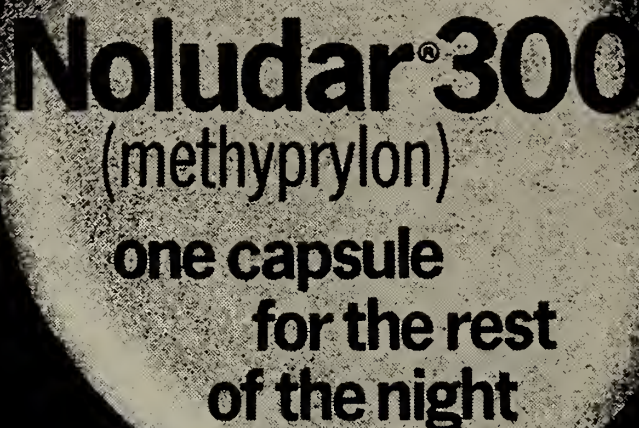
"In 1968, a national incidence survey conducted by the American Social Health Association for the Public Health Service found that although private physicians treat about 80 per cent of the venereal disease cases, they report only one in nine to public health officials," Dr. Webster said. "We believe that this commission will serve as the long-needed link between public health and private medicine."

Estimating about 2 million cases of gonorrhea and 75,000 cases of infectious syphilis in the United States last year, the ASHA, which has waged continuing campaigns against the diseases since World War I, said VD had reached pandemic proportions for the third time. The two previous times were at the close of the world wars. Dr. Jesse Steinfeld, Surgeon General of the U.S. Public Health Service, said gonorrhea has gotten "out of control and must be considered a national epidemic of major proportions." Dr. James McKenzie-Pollack, ASHA medical director, said that "for the first time in the penicillin era, we are seeing serious clinical complications of gonorrhea in the female."

Even with only a small fraction of VD cases reported, gonorrhea ranks first and syphilis fourth among reportable diseases in the United States.

Early in 1969, ASHA was asked by the American Medical Association, National Medical Association, and American Osteopathic Association to convene 23 health and medical organizations for the purpose of discussing a national VD preven-

(Concluded on Page 172)



Noludar[®] 300

(methypylon)
one capsule
for the rest
of the night

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

 **Roche**
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Book Reviews

ESSENTIALS OF CLINICAL ENDOCRINOLOGY by Norman G. Schneeberg, with Eight Contributors. The C. V. Mosby Company, St. Louis, 1970. \$22.50.

In his Preface, Doctor Schneeberg has stated that his goal was to distill an aliquot of the voluminous body of endocrine knowledge to a presentable and digestible essence for the student, the resident, and the practicing physician who are untutored in endocrine matters and who seek a didactic introduction or brief review of the subject. Clinical features are stressed, with particular emphasis on the practical aspects of therapy. He explicitly eschews a comprehensive textbook treatment, exhaustive reference manual, or bibliographic repository. For the sake of brevity, references are restricted to significant reviews (thoughtfully indicated by a symbol) and to literature directly quoted or extremely pertinent. Because of the exigencies of space several topics are treated only briefly and others, including endocrines and cancer, laboratory techniques, and several of the metabolic disorders of bone and of lipid metabolism, are completely omitted.

This reviewer believes that the author has succeeded admirably in his laudable purposes. Indeed, the emphasis on brevity, selectivity, lack of comprehensiveness, and planned omissions is misleading. For the selectivity has been thoughtful and expert, the treatment thorough and pithily organized, and the brevity achieved by comprehensive lists, tables, diagrams, and illustrations.

The book follows a format which includes an instructive introductory chapter on principles of endocrinology, chapters on neuroendocrinology, the hypothalamus and the pineal gland, the posterior pituitary gland and diabetes insipidus, a series of multiple chapters consisting of a general expository treatment followed by the specific diseases of the anterior pituitary gland, the thyroid gland, the adrenal cortex, the adrenal medulla, parathyroid glands, carbohydrate metabolism and diabetes mellitus, the ovary and menstrual disorders, the testes, abnormalities of sexual development, cytogenetics in endocrinology, endocrine problems of puberty and adolescence, and an interesting chapter on disorders, probably not of endocrine origin, of interest to the endocrinologist. There is a help-

ful appendix listing the multiple abbreviations used throughout the book for brevity, and a comprehensive index.

For each major gland there is an introductory survey of major items of historical interest, major elements of the relevant anatomy, histology, and pathology, and a substantial and instructive resume of the physiology and biochemistry basic to a rational understanding of the clinical features. The review of each hormone system is followed by a comprehensive treatment of the clinical aspects of hyperfunction and hypofunction, including symptoms, signs, major laboratory findings, and differential diagnosis, with a major emphasis on detailed and explicit therapeutic considerations.

The book is replete with valuable clinical teachings. Drawings, illustrations, charts, graphs, and tables are well selected, instructive, and well reproduced.

(Continued on Next Page)

**The New England Society of Clinical Hypnosis
and the Oral Surgery Dept. of the
Boston City Hospital Will Sponsor A**

CLINICAL HYPNOSIS WORKSHOP

April 29 & 30, May 1 & 2, 1971

at

**Mallory Amphitheater, Boston City Hospital,
Corner Albany and Massachusetts Avenues,
Boston, Mass.**

Open To All:

**Physicians, Dentists, Psychologists in Good
Standing in AMA, ADA & APA,
Outstanding Faculty**

For Application Form and Information

Contact:

Lawrence M. Staples, D.M.D.

P.O. Box 162

Holderness, N.H. 03245

Tel: 603-968-3322

DOCTORS

say "ah-h-h"

No group of professionals is more dedicated or more deserving of the good things in life than members of the medical profession.

One of these amenities is fine wines in which we specialize.

As a matter of fact, we have more than 1600 different types of wines from which to choose. That's one-third more than you'll find in any wine store in New York.

If you're not familiar with the proper choice of wine, we'll be glad to help you select just the right vintage for any occasion.

Join our Vintage Guild.

Membership is free.

We're specialists in wine and have many doctors as customers. When you sip one of our fine wines, we know you will say, "Ah-h-h."



TOWN
Liquor

179 NEWPORT AVE., RUMFORD
434-4563

This book is highly recommended to the house officer and practicing physician. It will probably become the textbook in endocrinology consulted most frequently and with satisfaction by the general physician having problems in this field.

MILTON W. HAMOLSKY, M.D.



ENDOCRINOLOGY AND HUMAN BEHAVIOR. Edited by Richard P. Michael, New York and Toronto. Oxford University Press, 1968. \$14.00.

Personal and sexual identity, existence, mental illness, criminality — everyone is talking about Behavior. Genes, chromosomes, operant conditioning and learning, all play a part; so do lesions in the brain, especially in the thalamus and hypothalamus. But hormones, gonadal and adrenal, play the significant and major role in Behavior. "Endocrinology and Human Behavior" summarizes the recent important work in this intriguing area.

The humanists, in all their modalities of expression, have described many of the patterns of animal and human behavior, especially those related to aggression, mating, and post-partum behavioral changes; clinicians since the beginning of time have been concerned with cyclic behavior, not only as related to the menstrual cycle in the female, but also in Periodic Disease. Aberration in behavior seen in the frank endocrinopathies is common work-day knowledge to the practitioner; but recognition is one thing, and an understanding of the physiology and mechanism is another. It is only during the past decade that the role of cortex, thalamus, hypothalamus, limbic system, pituitary releasing, and peripheral hormones have been integrated. Schemata that relate observed behavior to qualitative and quantitative changes within this complicated system have been devised. Simplification has occurred. The big scientific discovery is the interplay between maternal and peripheral hormones in the organization of the nervous system of the developing embryo. Resultant patterns of behavior follow in prenatal, neonatal, and adult life.

The entire concept of a timetable of organization and maturation of components of the central nervous system under the influence of peripheral hormones is one of the truly intellectually exciting things which has occurred in medicine. Properly then, the first section of the book is devoted to the influence of hor-

mones in the neonatal period. Robert W. Goy, in a decade of work on the effect of androgens in the prenatal and neonatal period, convincingly shows that the effect of androgens not only causes peripheral masculinization, but also leads to the imprinting of "male" behavior patterns in treated females, so that when they mature they behave as males. This is true for the rat, the guinea pig, and the dog. Associated behavior, in addition to the sexual attitudes and patterns, embraces such things as the male micturition pattern and cyclic running behavior. In primates injection with testosterone at a neonatal critical stage results in such anthropomorphic characteristics of male behavior as rough and tumble play and male running patterns. The androgen effect can only be obtained when administered during a critical time in the early life of the developing animal when organizational patterns are ready for maturation. The presence or absence of testosterone in the brain at this time determine future male or female behavior patterns. Late injections of testosterone up to adulthood have no effect, the timing is critical — it must be neonatal. Human developing infants react in the same way to the presence of testosterone at this maturation time. Human female hermaphrodites occur spontaneously by the presence of testosterone in utero from androgen-secreting adrenals or excessive progestins. This naturally occurring phenomenon confirms the experimental models in that basic male behavior patterns, even much more so than the development of secondary sex characteristics, is dependent upon the addition of androgens to the circulation of the brain at a critical maturation point. The presence of testosterone at this critical time in the area of the hypothalamus suppresses normally occurring cyclic behavior. A very important concept of Money and Ehrhardt is that masculinization represents "something added".

A series of psychological and behavioral parameters was analyzed in female hermaphroditism resulting from androgens, and was compared with Turner's syndrome. Although not conclusive, the female hermaphrodite shows her male organizational patterns in a preference for intense outdoor physical activity, being recognized as a tomboy, preference for boys' toys, an indifference to dolls, and priority of career to marriage. Here sweeping generalizations are always dangerous; yet in all experimental situations and similar spontaneously-arising pathological conditions, the evidence is clear that male behavior patterns result from the

presence of androgens in and about the thalamus and hypothalamus at a critical period in the embryological development of all mammals. This is time-sensitive; the pattern once established is irreversible. Maleness, in the behavioristic sense, results from the addition of androgens to a neutral state; estrogens are not necessary for femaleness. Femaleness results purely from the absence of testosterone. Clinically this is suggested by the typical femaleness in behavior patterns as shown in Turner's syndrome where clearly there is a lack of estrogen, as manifested in the appearance of secondary sex characteristics.

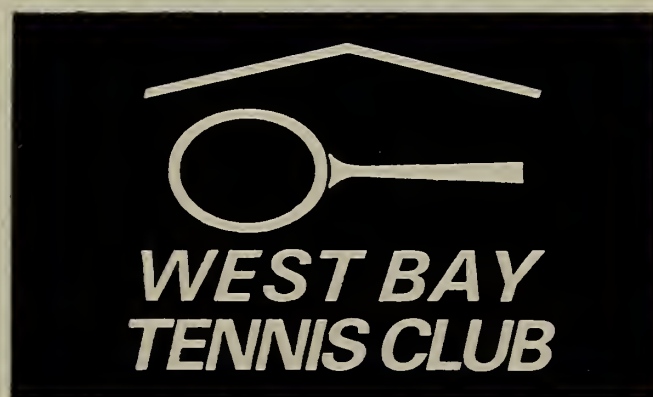
Sexual behavior in all animals, including primates, is conspicuously and dramatically under the influence of gonadal hormones. Behavioral alterations, not only in receptivity to copulation, but also in work output, swings in mood, and irritability due to sex hormones are known to every practicing physician. Richard P. Michael has quantitated the behavioral aspect of the cyclic hormonal changes of the menstrual cycle and has confirmed most clinical impressions. Fortunately for experimental purposes, the Rhesus monkey has a true twenty-eight day menstrual cycle and has analogous behavior patterns to the human subject. The analogies are so congruous as to make it difficult to

(Continued on Next Page)

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

**OPEN TO ALL
PLAYING TIME STILL AVAILABLE**



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

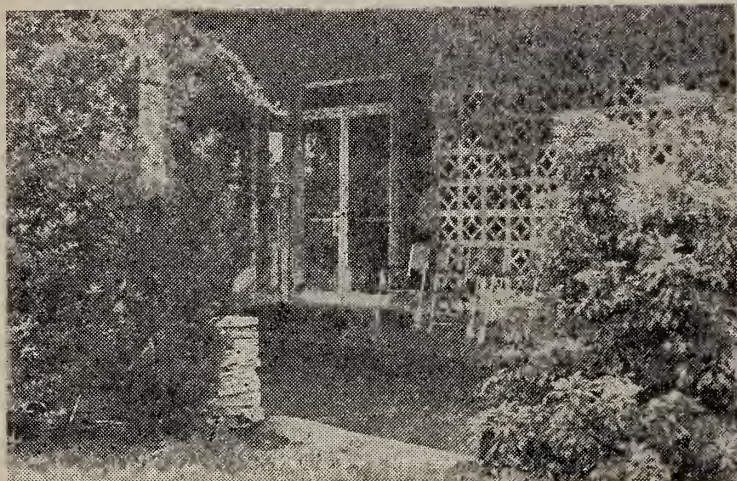
or write Box 387

Warwick, R. I.

HEALTH HAVENS

NURSING HOME

A Participating Extended Care Facility
In Federal Medicare



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail

East Providence

Tel. 438-4275

JCAH Accredited

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

Tel: — 831-4833

Providence, Rhode Island

find a lack of coincidence. Sexual incompatibility and sexual selectivity between males and females appear immediately in Michael's study. This was not the object of his study, but to this writer it is a fascinating field in comparative psychiatry and psychology which should be investigated. The phenomenon was merely an obstacle in his experimental design, since in order to quantitatively study sexual behavior in the male and female primate, there has to be sexual compatibility. Even in monkeys love is not so simple as "boy meets girl". Rather even on the non-cultural level of Rhesus monkeys it is more in keeping with the observations of the great English poet, Marlowe, who said:

It lies not in our power to love or hate,
For will in us is overruled by fate.

When two are stripped, long ere the course
begin,

We wish that one should lose, the other win;
And one especially do we affect

Of two gold ingots, like in each respect:

The reason no man knows; let it suffice

What we behold is censured by our eyes.

Where both deliberate, the love is slight:

Who ever loved, that loved not at first sight?

The introduction of a male to a female monkey may result only in aggression. This occurs without reasonable explanation and is a characteristic of the pair and not of the individuals. Also, in the absence of aggression, the pair may show little or no interest in each other, manifesting a minimum of sexual interaction; and yet, with rearrangement of partners, activity may be intense. Michael had to choose natural lovers. How do selected highly compatible pairs of animals behave during a twenty-eight day cycle? Indisputably, the heightened and clear-cut peak of copulations occurs at the female midcycle. During the luteal phase there is a conspicuous decrease in copulatory activity to less than one-fifth of the activity at the midcycle. There is a secondary rise during the day or two before the onset of menstruation. These are the concrete figures; what of the factors? Invitations by the female, as judged by well-defined behavior, vary little during the entire cycle; attempts at mounting by the male vary insignificantly during the cycle. But invitational activity on the part of the female does not result in response by the male during the luteal phase; and, conversely, attempts by the male during the luteal phase are significantly rejected by the female despite her invitational attitude. It all adds

up to a peak of sexual activity at midcycle and a rapid fall-off immediately thereafter.

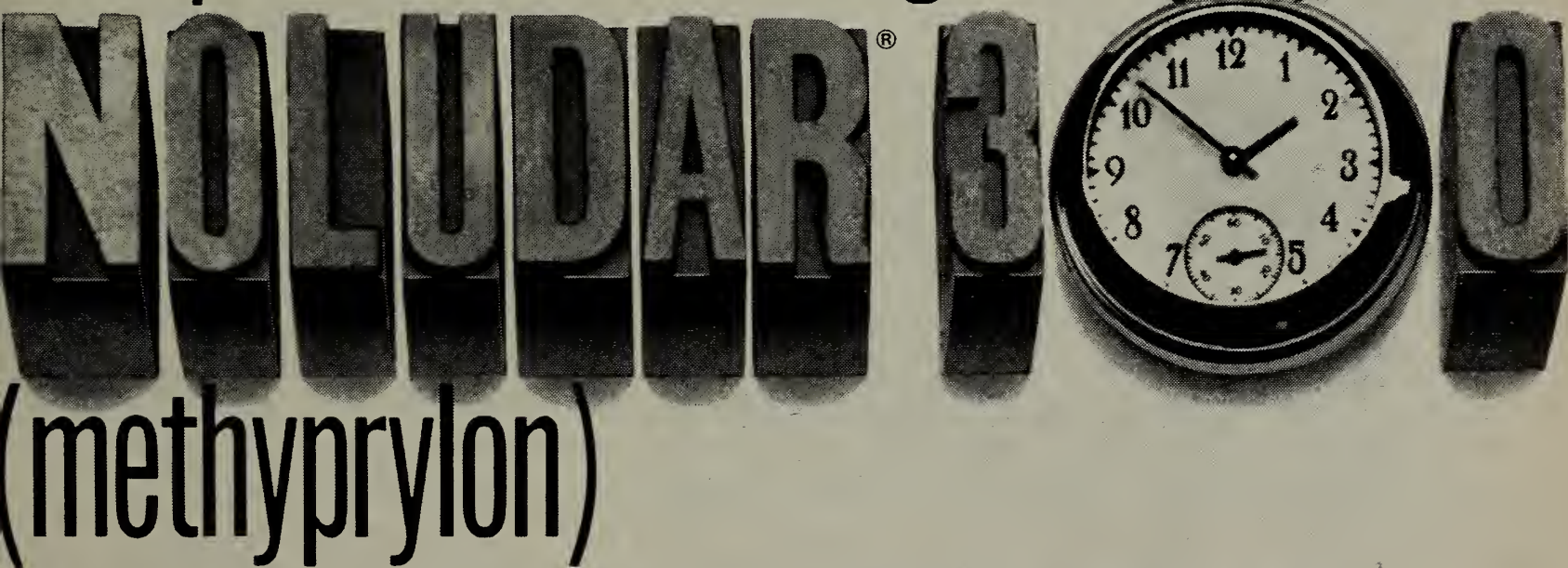
How then is the hormonal state of the female, which is the determining factor, communicated to the male? Probably by olfactory cues or pheromones. The partners are separated by a mesh partition, and the male obtains access to the female by pressing an operant conditioning lever a predetermined number of times. Olfactory cues were eliminated by cutting the nerve to the organ of Jacobson and by plugging the nasal olfactory area. Castrated female monkeys who had received intravaginal estrogens in a dose insufficient to produce local changes failed to cause a response in the anosmic males; after removal of the nasal plugs, the anhormonal females treated with intravaginal estrogens were a normal stimulus to the males, who went on to press the lever in the operant conditioning cage, following which normal copulations took place. The conclusion is inescapable that the cues were olfactory, not local or behavioral. Pheromones constitute one of the most fascinating unexplored aspects of human physiology; it has such

clinical ramifications as the effect on libido of the pheromones of progesterone found in "the pill". The possible clinical usefulness of intravaginal estrogens and supplemental estrogens in the sexually inadequate couple could be of clinical interest. In the Rhesus monkey the use of "the pill" in the form of 1 mg. of ethynodiol and mestranol during three cycles showed the most obvious and clear-cut reduction in copulatory frequency; more importantly the level of sexual attractiveness, as measured by the mean time required by males to develop an interest in mounting, was greatly reduced.

"Distress" in the menstrual cycle and the postpartum period is more frequently observed clinically probably than any functional female disorder. Postpartum depressions to some degree are a normal consequence of delivery. The offending agent is progesterone, but more important than the absolute concentrations of progesterone is the rapidity with which concentrations are altered. The concentration of progesterone may drop five to ten fold between the first and second stages of labor.

(Continued on Page 171)

one capsule for the rest of the night



Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone[®] Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206



100204

The Organization And Delivery Of Health Services In Rhode Island

Health Official Gazes Into Crystal Ball To

Divine The Future Of Health Care

By John T. Tierney

In the current scene the delivery of medical care is under severe criticism. We hear about the "Health Care Crisis", the "Non-System", the "Pushcart Approach in a Supermarket Era".

While the present system may not be as responsive to health need as it should be and can stand improvement, it has nevertheless not been static. It has on the contrary been quite dynamic and is changing all the time. As an observer of the Rhode Island health care scene, I am reminded of a kaleidoscope, for every time I take a look I see a different picture. In spite of our impatience, things have been happening in Rhode Island, mostly within the last five years.

A major change has been one of *attitude*. While most people involved in medical care were aware of the many shortcomings of the system, it was something that wasn't talked about generally or faced up to. But as the situation became more acute, because of the problems of accessibility and cost, more people became interested, and it has become a more common topic of discussion in all levels of society.

JOHN T. TIERNEY, *Assistant Director of Health, Rhode Island Department of Health.*

Delivered at the annual meeting of the Hospital Association of Rhode Island, November 19, 1970.

THREE FEDERAL LAWS

The 89th Congress of the United States enacted into law three significant pieces of legislation which have had a great impact on health care in Rhode Island to date, and will continue to have an important impact on the foreseeable future — Medicare and Medicaid, the Regional Medical Programs, and Partnership for Health.

Public Law 89-97 amended the Social Security Act and established a federal program of health insurance for all Americans over 65 years of age. This legislation is referred to as Title XVIII, or Medicare.

As part of the same public law, Title XIX, or Medicaid, made provision for federal grants to states to administer medical care programs for poor people under the public assistance programs and for comparable groups of medically needy people who have enough income for daily living but not for medical expenses.

Our current crisis in health of high cost and limited availability could be the direct result of a phenomenon in economics which we know as the law of supply and demand. Through these social security mechanisms, approximately 125,000 Rhode Islanders are provided money to buy health.

(Continued on Next Page)

care from a system that is already overburdened. These are people with immense health needs — the old and the poor.

With a limited supply of health resources and high demands for physicians and hospital beds, an increased demand for services makes the inevitable happen: *The price goes up*. Based on this experience with Medicare and Medicaid, many authorities in the health care field believe that simply providing additional purchasing power to people through the mechanism of universal health insurance, without restructuring the way medical services are delivered, could result in a disaster.

In addition to providing purchasing power for medical services for all people over 65 years of age, Title XVIII introduced new methods and for the first time a set of standards for the delivery of health care. The *new* standards related to qualifications of personnel, criteria for facilities, and mechanisms such as utilization review to monitor performance.

Public Law 89-239, providing for programs popularly known as regional medical programs, or heart, cancer, and stroke, through the use of grants encourages and assists in the establishment of regional cooperative arrangements among medical schools, research institutions, and hospitals, for training, research, and education to improve patient care. It attempts to improve generally the health manpower and facilities available to the nation.

Rhode Island, together with Massachusetts and New Hampshire, is part of the Tri-State Regional Medical Program. While the central agency, the Medical Care and Education Foundation, is located in Boston, several professional workers are engaged full-time in Rhode Island, and grants have been made to agencies in the state to meet these objectives.

Public Law 89-749, referred to as "Partnership for Health", recognizes that good health for everyone in the United States can be achieved only through effective *partnerships* among all levels of government, official and voluntary agencies, and individuals and organizations.

It recognizes that this objective can be carried out only by *comprehensive planning* for health services, health manpower, and health facilities by strengthening the leadership and capabilities of state health departments and that support of health services provided people in their communities should be broadened and made more flexible. To these ends, grants are made to develop com-

prehensive health planning programs, for the establishment of areawide planning agencies and for training, studies, and demonstrations in comprehensive health planning and health services development.

RECENT STATE LEGISLATION

While on the subject of legislation, it would be appropriate to discuss recent Rhode Island state legislation and its relationship to the delivery of health care in Rhode Island. In this respect there have been two significant pieces of state legislation.

The first provided for the consolidation of all public health activities within the state in the State Department of Health. This resulted in the elimination of city and town departments of health, the upgrading of the qualifications, training, and supervision of health personnel, and the equitable distribution of sanitation services throughout the state.

The second item of legislation is of special interest to a hospital oriented audience. It amended the hospital licensure act. The state legislature, concerned about increasing health care costs, established a legislative commission to review the situation and make recommendations. After lengthy hearings and extensive participation by national and local authorities, the commission determined that some control of rising costs could be effected if duplication of services was prevented, and construction of hospital beds and installation of expensive equipment were controlled.

For these reasons the hospital licensure law was amended, and provision was made that no hospital could engage in "substantial construction" without the approval of the Director of Health. The law provided for the creation of a 19-member Health Services Council to advise the Director of Health. In addition, authority was granted to the Department of Health to obtain from hospitals financial or utilization data required to carry out the intent of the legislation. Your own association has been most helpful to the Department of Health in developing rules and regulations relating to this legislative mandate.

SYSTEM CHANGES

In addition to legislative changes in the State, there have also been some system changes. The system changes resulted from the establishment of new mechanisms for providing health services and a restructuring of existing relationships and methodologies. The following is a review of some of these.

1. The neighborhood health center concept is an example of a systems change for the better. *Poor people* have the highest incidence of disease and disability, and medical services for them have been inaccessible, impersonal, and fragmented. Recognizing this, the community action program of the City of Providence established neighborhood health centers. The first neighborhood health center was opened in the Fox Point section of Providence in January 1967. Currently there are nine neighborhood health centers in Providence, and developments along this line are taking place in several other communities throughout the state.

This innovation on the health care scene introduced the principles of outreach and community involvement. The health centers are truly meeting a health need. As any new concept may, they have been having a difficult time. Increasingly, the dialogue between hospitals and neighborhood health centers has been improving. The lessons learned from this experience may well have a great influence on the way medical care will be provided *to all of us* in the 70's and 80's.

2. Automated health testing is another new concept which has been operational in Rhode Island for some time now. Originally conceived as an efficient way of screening for the early detection of disease, it is increasingly viewed as offering assistance in the problems of health manpower, accessibility, triage, and costs, through the use of technicians, computers, and organization. In one place, in a period of about two hours at a cost of \$40.00, a patient can receive a battery of tests which in the traditional pattern of delivery would take several days and cost several times as much.

During the introductory phase the center and the concept have been received by the public most enthusiastically as evidenced by the long waiting list and the thousands of individuals who offered to pay the full costs for this health evaluation. The new challenge of multi-health testing is to determine how it can best be fitted into the pattern of delivery of health services now and in the future.

3. The recent formation of the Rhode Island Group Health Association is another instance of incipient systems change.

According to the traditional pattern of providing physician services in Rhode Island, each physician acts as an independent entrepreneur and receives a fee as each service is rendered. There are some who feel that this pattern of organizing and

financing physicians' services is, by itself, unable to respond to the health needs of today.

Some of the labor unions in this state felt that the group health concept would contribute materially to the availability and economy of health service for their members. They expressed their conviction by organizing the Rhode Island group health association as a consumer oriented form of group medical practice. This new method of delivering medical services in Rhode Island is based at the St. Joseph's--Our Lady of Fatima Hospitals. The initial subscriber group will consist of between 10,000 and 13,000 individuals.

Now in the process of organizing and engaging staff, the group will become operational in 1971. Initially, membership will be limited to union members, but after a period of operation, non-union members will be able to subscribe to the service.

The Rhode Island Department of Health welcomes this new mode of delivery of health care and will watch the development of this Rhode Island innovation with interest. We hope it will receive objective attention and assessment from all groups interested in finding solutions to today's health care delivery problems.

4. The use of full-time physicians to deliver direct patient care is a relatively recent development. Some hospitals have employed full-time physicians for many years, but it is only recently that they have been employed on a full-time basis to deliver direct care. This innovation has resulted primarily from past demand for emergency room care. Several hospitals in the State now employ full-time physicians on a round-the-clock basis to provide health services in their community. Depending upon your definition of emergency care, from 50 to 90 per cent of the patients cared for by these physicians do not truly represent emergency need. But patients are more and more tending to use hospital emergency rooms as either the only, or the most convenient, place in the community where physicians' services can be obtained. Hospitals have clearly recognized and responded to this need, and it would appear that the trend will continue as a highly practical and direct device for improving the delivery of health care.

5. Extended care facilities, made possible through the provisions of Medicare legislation, are another important element in the changing system of health care delivery. I'm sure that this audience is quite aware that the *most efficient use* of
(Continued on Next Page)

the hospital bed is considered the key to control of hospital costs. Extended care facilities ease the strain on the demand for acute beds.

As recently as 5 years ago there were no extended care facilities in Rhode Island. Today we have 21 facilities with 1,244 beds; and 3 hospitals — Newport, Memorial of Pawtucket, and South County — operate or are constructing extended care facilities.

6. A most important event on the health care scene has been the medical science program at Brown University. This development has brought to our state many distinguished scientists who have raised the level of medical care *available to us all*. We have seen affiliation agreements between the University and Rhode Island, Roger Williams General, The Miriam, Memorial of Pawtucket, and Providence Lying-In Hospitals.

We look forward to the continued excellence that the medical science program has brought to our community, and see the University playing an increasingly important role in the development and coordination of health services for us all.

7. A new entry on the health care scene called SEARCH — (for services, evaluation, analysis, and research in community health) — was organized this year. The initial incorporators are the Rhode Island Departments of Health and Social Welfare, Brown University, Rhode Island Board of Regents for Education, Rhode Island Medical Society, Hospital Association of Rhode Island, Health Planning Council, and Blue Cross. The formal title is Rhode Island Health Services Research, Inc.

The purpose of SEARCH is to conduct studies and experiments in health care services and their delivery on a statewide basis with three primary goals:

1. Professional and public acceptability;
2. Equitable access to and utilization of health services; and
3. Increased effectiveness of health services including the containment of costs.

The organization has been awarded an HEW contract, and specific projects will be carried out by staff employees of the corporation or on a contractual basis with the several institutions and hospitals in the State.

8. An important new component in the health care system is the home care or home health services. In the past few years, there have been some major changes in this phase of the delivery system.

In 1965 there were 27 home health agencies —

or as they were known then — visiting nurse associations. A problem that Rhode Island had in this aspect of health care — unmatched by any other state — was that there were too many agencies.

As a result of state legislation designed to consolidate public health services and Medicare legislation imposing standards, the State Department of Health, working with agencies and communities, began to strengthen this whole structure. At the same time mergers, consolidations, and sub-contracts were being effected so that at the present, exclusive of hospital home care programs, 27 visiting nurse agencies have been reduced to 13 home health agencies — a major accomplishment.

During this same period the hospitals began to play a major role in home health services by organizing hospital-based home care programs, and also by strengthening relationships between the hospital and independent home health agencies. Where just a few years ago there were no hospital-based home care programs, now there are three — Kent County, Memorial of Pawtucket, and Westerly — and others are in the planning stage.

The Washington County Public Health Nursing Agency is constructing a new building on the grounds of the South County Hospital. The Kent County Hospital has offered land to the Warwick Area Home Health Agency; the Memorial Hospital of Pawtucket is providing management engineering services and nursing supervision to the visiting nurse service of Pawtucket; and several hospitals provide drugs, supplies, and other support to the home health agencies in their area.

9. There have been many other changes in the health care delivery system in Rhode Island. Time permits me to mention them only briefly. They are:

1. The establishment of the Child Development Center at Rhode Island Hospital;
2. The merger of St. Joseph's and Our Lady of Fatima Hospitals;
3. The opening of hospital staffs to osteopathic physicians;
4. Activities of the office of Comprehensive Health Planning, the Health Planning Council, and your own association;
5. The current study to determine the feasibility of collaborative efforts among hospital clinical laboratories;
6. The prospective reimbursement rate among hospitals and other innovations introduced by Blue Cross;
7. The prepayment studies conducted by the

Regional Medical Program and Roger Williams Hospital;

8. The Ambulatory Patient Center at Rhode Island Hospital;
9. The Mental Health Program at Newport Hospital;
10. The maternity and infant care program at St. Joseph's Hospital;
11. The family planning program in conjunction with Providence Lying-In Hospital;
12. The dialogue between The Miriam Hospital and the Neighborhood Health Centers;
13. The dental program for retarded children at the Joseph Samuels Dental Clinic; and
14. Plans for the development of alternate levels of care at Woonsocket Hospital.

And there are many more.

SPECULATIONS ON THE FUTURE HEALTH CARE SYSTEM

I come now to the risky part of this paper. It is risky because speculation, while always dangerous, is doubly so when it is speculation about health services delivery. It is also risky in that I may be misunderstood as advocating changes, when all I am doing is attempting to follow certain trends into the future. Let me proceed with the understanding that I am now merely gazing into my crystal ball, a ball that may have a crack in it, and that time alone can determine the accuracy of my speculations.

Many of the speculations are based on the existence of some form of universal health insurance. There seems to be little discussion of the inevitability of the program. The only discussion revolves around *when*. Related to this development will be financing on a capitation basis and more emphasis on preventive health services.

First of all hospitals appear to be emerging as the focal point for the delivery of health services in a given community. To effect this it would appear that some far-reaching changes are in the offing:

1. The hospital will begin to redefine its goals. As a result, it will change from being "dedicated to the care of the sick" to being "dedicated to the promotion of health". It will learn increasingly to deal with the well and to keep them well. It will become an ambulatory center for health services with beds attached. Its community will no longer be limited to the sick, the poor, or the emergency patient. The community is all the people, those who live there, who work there, those who go to school there, and those visiting or passing through.

2. The hospital will expand its range of services to provide for primary comprehensive health services, or in other words, for the majority of health services. These will include family health, pediatrics, maternity services, family planning, mental health, emergency care, dental care and eye care.

3. Hospitals will develop closer relationships with home health agencies, extended care facilities, nursing homes, and neighborhood health centers.

4. The hospital will train manpower — new kinds of manpower — and educate the patient to *accept* and *use* these *new* people and this *new* system.

5. The character of the hospital board is likely to change. Boards may more closely resemble the corporate structure of private business in size, representation, and function. Boards may become paid, rather than voluntary bodies. And boards may include physician members.

6. Institutional names may even be changed to reflect their new role. A hospital will then become known as a "Health Center" or "Health Service".

Currently, most of the health care system is organized around the providers' convenience. There is an *undeniable* trend for this orientation to change toward the consumers' convenience, or at least the community's convenience.

Coincident with the enlarged concern and responsibility of the hospital, but not necessarily directly related to it, there will be, I believe, a gradual but definite decrease in the bed capacity of the state-administered hospital system.

HEALTH MANPOWER TRENDS

Related to health manpower, continuance of current trends foreshadows these situations:

1. The educational level of the providers of direct patient care services will decrease. There is a serious question whether the master degree level nurse, nutritionist, and social worker are in effect over-educated to the point where they represent too much of a societal investment to justify their use in providing a service on a one to one basis.

2. The "laying on of hands", traditionally reserved to physicians, appears to be a privilege that will be extended to existing and new categories of non-physician health personnel.

3. The trend toward physicians becoming salaried members of hospital staffs or joining self-incorporated groups related to hospitals will continue.

(Concluded on Page 172)

A Comparative Study Of The Treatment Of Fractures Of The Shaft Of The Femur By Traction And Open Fixation

Traction Indicated For Patients Under Sixteen, With Intramedullary Nailing Reserved For Patients Over Twenty-Two

By A. A. Savastano, M.D. and Eusebio Cadena, M.D.

When a patient presents with a fractured femur, it is often difficult to decide upon the type of treatment most likely to obtain the best result in the shortest possible time. In many cases open surgery with internal fixation is undertaken to reduce the length and cost of hospitalization and make nursing care easier. Open surgery, however, is not without risk, as postoperative infection still occurs even with meticulous surgery. Other local complications include broken fixation devices, non-union, and mal-union. On the other hand, patients treated conservatively must face long periods of traction or immobilization, functional disability, and economic hardships.

HISTORY

Treatment of fractures of the shaft of the femur for many years has consisted of continuous traction in some kind of a suspension apparatus until clinical consolidation occurs. Plaster spicas are also often used. These methods have been deemed

A. A. SAVASTANO, M.D., of Providence, Chief, Department of Orthopedic Surgery and Fractures, Rhode Island Hospital.

EUSEBIO CADENA, M.D., former senior resident, orthopaedic surgery, Rhode Island Hospital and present Associate Professor in Orthopaedic surgery at the University of Bogota Medical School, Colombia, South America.

to be the safest forms of treatment, albeit the most time-consuming. Guy DuChauliac was the first to use a suspension apparatus for the treatment of fractures of the femoral shaft. This form of management has been continued through the centuries with innumerable modifications but utilizing the essential basic principles of DuChauliac.

Because conservative treatment carries with it the danger of pneumonia, circulatory failure, decubitus ulcers, joint stiffness, severe muscle atrophy, and general debility, attention has been focused during the past fifty years on the reduction of the period of hospitalization and disability. Many methods of internal and external skeletal fixation have been used to accelerate bone union, permit earlier ambulation, and reduce joint stiffness.

Lambotti in 1907 described a type of internal fixation of the clavicle in his textbook of operative surgery. Then Groves in 1918 and the Bush brothers in 1936 improvised a method of intramedullary pin fixation for comminuted Monteggia fractures. In 1937 the same authors designed a pin for intramedullary fixation of the femur and humerus. Intramedullary fixation became popular, especially in Europe, after the report of the experiences of Kuntcher in 1940. After World War II intramedullary fixation was utilized in selected cases in this country.

Later investigators introduced new intramedullary devices using the same basic principles of internal fixation. Howard W. Schneider, Dana M. Street, and Lottes have become familiar names in the field of intramedullary fixation of fractures.

RHODE ISLAND HOSPITAL CASES

A series of 132 unselected cases with femoral shaft fractures treated at the Rhode Island Hospital during 1963 through 1968 inclusive is the basis of this report. These cases comprised two groups, one treated by open reduction and internal fixation and the other conservatively, chiefly with some form of traction. Conservative treatment consisted either of skeletal and balanced suspension traction or Russell traction, a total of 70 cases.

The age of the patients ranged from 14 to 92 years. There were 81 males (61.3 per cent) and 51 females (38.4 per cent). The time of healing in both groups averaged 14 months, with the consolidation being demonstrated both clinically and radiographically. Of the total, 126 cases were closed fractures, while 6 were open fractures. Thirty-nine were associated with other multiple severe trauma (Tables 1 and 2).

OPERATIVE CASES

In the operative cases a lateral or posterolateral approach was used in all cases. Schneider, Hansen-Street, or Kuntcher nails were used in 48 cases. Smith-Petersen nails and long side plates were used in nine fractures starting just below the lesser trochanter. Parham bands were used in 3 long oblique fractures. Long Sherman side plates with screws were used in 4 cases (Table 3).

Surgery was delayed between 4 days and 2 weeks in 49 cases to allow better surgical preparation of the patients, 15 of whom had associated multiple trauma.

Primary bone graft was used in only 3 cases. Most of the operative cases were permitted to ambulate within 10 days to 2 weeks postoperatively, with partial weight bearing and with the aid of crutches or walkers. The range of motion of the knee was satisfactory in almost all cases, as all cases had a full range of extension and at least 90 degrees of flexion. Hospitalization ranged from 2 to 4 weeks.

COMPLICATIONS — OPERATIVE CASES

There were no immediate operative deaths, and 3 postoperative deaths within 2 weeks (4.8 per cent). Two of these patients were over 85 years of age while the other, a 68-year-old patient, died of a massive pulmonary embolism.

Table 1
AGE DISTRIBUTION

| OPERATIVE | | CONSERVATIVE | |
|-----------|------------|--------------|------------|
| Age | Patients | Age | Patients |
| 14 | 0 | 14 | 4 (5.7%) |
| 15-24 | 17 (26.5%) | 15-24 | 29 (41.4%) |
| 25-44 | 17 (25.0%) | 25-44 | 13 (18.5%) |
| 45-64 | 17 (28.2%) | 45-64 | 16 (22.8%) |
| 65-over | 13 (20.3%) | 65-over | 8 (11.4%) |

Table 2
FRACTURE CHARACTERISTICS

| | |
|-------------------------------------|-------------|
| Transverse | 54 (40.1%) |
| Comminuted | 36 (27.3%) |
| Oblique | 38 (28.8%) |
| Segmental | 4 (3.0%) |
| Open | 6 (4.5%) |
| Closed | 124 (95.5%) |
| Associated With Severe Trauma | 39 (29.5%) |

Table 3
FIXATION DEVICES

| | |
|---------------------------------------|----|
| Schneider Nails | 34 |
| Hansen-Street Nails | 10 |
| Kuntcher Nails | 2 |
| Parham Bands | 3 |
| Smith-Petersen Nails and Plates | 9 |
| Side Plate and Screws | 4 |
| Total | 62 |

Table 4
COMPLICATIONS—OPERATIVE CASES

| | |
|--|----------|
| Operative Deaths | 0 |
| Postoperative Deaths (within 2 weeks) | 3 (4.8%) |
| Infections | |
| Superficial | 1 (1.5%) |
| Deep (Osteomyelitis) | 3 (4.8%) |
| Delayed Union | 6 (9.7%) |
| Non Union | 2 (3.0%) |
| Broken Devices | |
| Schneider | 1 (1.5%) |
| Plates | 2 (3.0%) |
| Renal | 0 |
| Thromboembolism | 4 (6.4%) |
| Decubitus | 2 (3.0%) |
| Refractures | 2 (3.0%) |

Four infections were encountered, 1 of which was superficial while the remainder were deep with osteomyelitis resulting.

Three (4.8 per cent of cases) exhibited delayed union and six nonunion (9.7 per cent. There were 3 broken internal fixation devices (4.8 per cent). No renal complications occurred. Thromboembolism occurred in 4 cases (6.4 per cent). Small decubitus ulcers developed in 2 cases (3.0 per cent). Two cases sustained refractures (3.0 per cent).

Autogenous bone graft was used in two cases with internal fixation in the previously mentioned fracture cases. Both of these cases resulted in solid union (Table 4).

COMPLICATIONS — NON OPERATIVE CASES

In this group the following complications were encountered: Thromboembolism 14 cases (20.0 per cent); thrombophlebitis 3 (4.3 per cent);

(Continued on Next Page)

| Table 5 COMPLICATIONS—NON-OPERATIVE CASES | | |
|--|----|---------|
| Thromboembolism | 14 | (20.0%) |
| Thrombophlebitis | 3 | (4.3%) |
| Myocardial Infarction | 1 | (1.4%) |
| Decubitus | 2 | (2.8%) |
| Pin Tract Infection | 1 | (1.4%) |
| Delayed Union | 6 | (8.5%) |
| Non Union | 2 | (2.8%) |
| Renal | 3 | (4.3%) |
| Dead During Traction Period | 5 | (7.1%) |
| Refractures | 10 | (14.2%) |

| Table 6 TYPE OF TRACTION | | |
|-----------------------------|----|--|
| Russell | 43 | |
| Skeletal—Simple | 10 | |
| Balanced Skeletal | 12 | |
| Balanced Russell | 5 | |

| Table 7 KNEE MOTION | | | |
|------------------------|----|---------------|----|
| OPERATIVE | | NON-OPERATIVE | |
| 0°- 45° | 1 | 0°- 45° | 5 |
| 45°- 90° | 12 | 45°- 90° | 30 |
| 90°-120° | 18 | 90°-120° | 14 |
| 120°+ | 33 | 120°+ | 21 |

myocardial infarction 1 (1.4 per cent); decubitus ulcer 2 (2.8 per cent); pin tract infection 1 (1.4 per cent); delayed union 6 (8.5 per cent); non union 2 (2.8 per cent); renal complications, including pyelonephritis and nephrolithiasis 3 (4.3 per cent); patients who died during the traction period 5 (7.1 per cent). Ten patients (14.2 per cent) sustained refractures through the previous fracture site, three of whom underwent internal fixation during the second hospitalization period (Table 5).

The average time for the starting ambulation in these patients was 19 weeks post injury. Some cases did not start until the 25th to the 32nd week.

CONSERVATIVE METHOD

Russell traction was used in 43 cases, balanced Russell traction in 5 cases, skeletal traction in 10 cases, and skeletal traction with balanced suspension in 12 patients (Table 6). The latter group was comprised of severely comminuted spiral fractures, some of which extended into the supracondylar area. In the patients treated with Russell traction, change of traction straps was necessary periodically in most patients, especially in the elderly group because of skin irritation or traction strap splitting. Balanced skeletal traction was used in 12 patients with Steinmann pins placed at the level of the tibial tubercle. Nursing care in the latter group was easier than in patients with simple Russell or simple skeletal traction. Patients in

balanced skeletal traction appeared to be more comfortable than those with other types of traction. After a reasonable amount of callus had formed, a one-and-a-half spica cast was used in 22 cases, a spica cast and brace in 25 cases, and a brace alone in 18 cases. Five required no additional protection. The average time of hospitalization for this group was 16 weeks, with a range of 10 to 45 weeks. Patients with multiple injuries and complications had the longest hospital stay.

Physical medicine was utilized in all cases, starting with quadriceps exercises, followed by the gradual addition of joint stretching and muscle re-education. Inability to extend the knee was gradually overcome after the patient was started on such therapy. A satisfactory functional range of motion was restored in most patients. When observed not less than 14 months after treatment, a significant number of patients, however, still lacked up to 5 degrees of full extension, but could flex their knees to a minimum of 90 degrees, i.e. to a right angle or better (Table 7).

CASE REPORTS

Case 1. B.J. 29 years of age. This patient sustained a comminuted fracture of the shaft of the femur. He was immobilized in skeletal balanced suspension traction for 15 weeks, and then a spica cast was applied. Refracture occurred 27 weeks following the accident. He was now placed in Russell traction for 9½ more weeks followed by an ischial weight bearing brace. The fracture healed with solid union, but patient developed a flexion contracture of the knee.

Case 2. V.M. 57 years old. Sustained a transverse fracture of the femur, treated conservatively in traction. Became lost to follow-up until he returned to the clinic one-and-a-half years later with a nonunion at the fracture site. Schneider nailing and a bone graft were done. Fracture healed with solid union.

Case 3. D.L. 48 years of age. Sustained an open fracture of the femur. Treated with Russell traction for 23 weeks, sustained refracture through same level. Schneider nailing and bone graft done. Fracture healed with solid union.

Case 4. B.J. 22 years of age. Sustained a fracture of the femur. Placed in Russell traction. Nine days later he underwent intramedullary fixation with a Schneider nail. On the twenty-fourth day after injury the patient was discharged to be followed in the Fracture Clinic. He failed to report to the clinic. Four months later when he came to

(Concluded on Page 170)

Acute Perforation In Regional Enteritis

Relatively Rare Complication Usually Occurs As Initial Episode In Acute Phase Of The Disease

By Robert Gorfine, M.D.

Since the original description of the clinical pathological entity of regional ileitis by Crohn, Ginzburg and Oppenheimer¹ much has been written regarding this disease.

Among the numerous complications resulting from regional enteritis, perforation and subsequent fistulization to adjacent organs, the abdominal wall, and perineum are relatively common. However, acute perforation into the free peritoneal cavity is infrequent. It may be the initial event in this condition. The case here reported was first manifested in this way.

The first recorded case of free perforation of regional ileitis was reported in 1935 by Arnheim². The diagnosis was established at autopsy. In 1937 Halligan and Halligan³ stated that "until the present time, the occurrence of acute free perforation as the first sign has never been noted clinically heretofore." Their case was treated by closure of the perforation with a mattress suture and an omental patch. In 1954 Milwidsky and Barzilay⁴ indicated that "acute free perforation with generalized peritonitis is an extremely rare complication of regional ileitis the result of which is nearly

ROBERT GORFINE, M.D., *Providence, Rhode Island, Senior Surgeon at The Miriam Hospital, Providence and Surgeon at The Memorial Hospital, Pawtucket.*

always fatal." Yet, interestingly, Crohn⁵ in 1957 wrote, "free perforation of ileitis into the peritoneal cavity never occurs, or at least I have not seen it."

Although rare, a number of cases of free perforation have been reported in the literature over the past several years. Kyle⁶ noted after his exhaustive review of the literature that 91 cases had been reported up to March of 1968; he added 4 more cases. With two further cases reported by Alavi⁷ in 1969, the total number to date would appear to be 97. Our case adds to the growing number of reported cases.

In most reported cases gastrointestinal symptoms such as abdominal cramps, pain, weight loss, and diarrhea had been present anywhere from months to years prior to the acute perforation. However, as in the present case, others presented with signs of an acute surgical abdomen without prior symptoms.

CASE REPORT

A.M.F., a 28-year-old white male, was admitted to The Miriam Hospital through the Emergency Room during the early afternoon of 12/5/69 with a history of sudden sharp stabbing pain throughout his entire lower abdomen. This was followed by nausea and vomiting as well as marked weakness. The patient denied rather vehemently any

(Continued on Next Page)



Fig. 1

Intact granulomatous ileum with marker at point of perforation at mesenteric attachment.



Fig 2.

Opened bowel with probe through perforation.

prodromal symptoms prior to the initial "attack" of abdominal pain. He had eaten a very light breakfast only and had had no lunch prior to the onset of his symptoms.

Although there was a history of a duodenal ulcer in 1965 for which patient was successfully treated medically, and follow-up x-ray studies were said to have shown complete healing of the ulcer, this history was not made available at the time of this hospital admission. Also it was later learned that about five weeks prior to the patient's acute symptoms of 12/5/69 he had experienced over a three day period several loose bowel movements daily, which he attributed to a so-called "virus". Two other members of the family had had a "similar condition" at that time.

Past history was non contributory.

Physical examination revealed a robust 28-year-old white male in obvious discomfort complaining of severe pains in the abdomen, particularly in the lower abdomen and somewhat more pronounced on the right side. A considerable degree of muscle spasm associated with marked rigidity throughout the abdomen but greater in the lower abdomen was present. This was associated with marked rebound tenderness in the lower abdomen. No peristaltic sounds were audible. There was marked tenderness on rectal examination both in the right as well as in the left iliac fossae, greater on the right side. White blood count was 25,000 with a marked shift to the left.

X-ray studies: Chest x-ray film at the time of admission was negative, and flat and upright films of the abdomen were non-diagnostic.

Course in hospital: Immediately following admission to the hospital patient was prepared for surgery. Upon exploration of the peritoneal cavity

a large amount of black, sanguineous fluid with a slight fecal odor was encountered. Upon removal of the peritoneal fluid by sponge and suction, it became apparent that the problem was one of acute regional enteritis characterized by diffuse granularity of the serosa, marked thickening of the mesentery of the affected small bowel, and the encroachment of the mesenteric fat upon the serosa. Further exploration revealed evidence of a perforation at the mesenteric border of the ileum approximately $4\frac{1}{2}$ feet proximal to the ileocecal valve. Approximately 5 to 6 feet of terminal ileum containing all of the grossly pathological bowel were resected, and an end-to-end anastomosis was carried out. A postoperative wound infection delayed discharge from the hospital until the 22nd postoperative day.. At the time of discharge patient was asymptomatic, had an excellent appetite, and had normal bowel movements. Following discharge from the hospital on December 27, 1969, patient remained asymptomatic for a year. He gained considerable weight and experienced normal bowel movements. On rare occasions he noted "occasional gas cramps." Follow-up gastrointestinal and small bowel x-ray series on November 17, 1970 showed evidence of recurrent regional enteritis with at least a single skip area. Recently he has had recurrence of more acute symptoms.

DISCUSSION

It has been observed^{2, 8, 9} that free perforation occurs as a presenting episode during the *acute* phase of regional enteritis, rather than during the chronic stage when the bowel is protected by a thick granulomatous reaction associated with thickening of the adjacent mesentery. Perforations usually occur along the mesenteric border of the small bowel where the entering blood vessels are

(Concluded on Page 169)

Needle Biopsy Of Liver: An Appraisal

Method Has Great Value In Diagnosis Of Hepatic Disease And Also Of Obscure Fevers

By Arturo Longobardi, M.D.

It is not by a whim of chance that the liver is the focus of this report. The importance of this organ in the context of our very survival is clear. The liver, as we learned in medical school, is a complex laboratory. This was known even before biochemistry through progress in research and development became a recognized medical science.

Indeed, better than any computerized laboratory available today, the liver is the processing plant of all outside elements introduced into the body, a watchdog, the link between the external world and the internal environment. If this is indeed true in health, the knowledge of its alterations in disease is especially valuable. Based on this premise, an attempt was made to understand what happens in the liver in various disease states directly or indirectly affecting its function and anatomical structure. Therefore, icterus, clinical and sub-clinical, hepatomegaly of whatever origin, and fever of unknown etiology, regardless of the liver size and in absence of cardiac murmurs, were the main conditions investigated. The results appear significant to a gratifying degree.

ARTURO LONGOBARDI, M.D., of Pawtucket, Rhode Island, physician, Department of Medicine, The Memorial Hospital

Presented at the Kenney Clinic Research Day at the Memorial Hospital of Pawtucket, Rhode Island on November 4, 1970.

TECHNIQUE

The instrument that made this study feasible was the so-called Menghini needle. Simple suction with a sterile water-filled syringe operated by an assistant, skilled or unskilled, and a rapid, lightning thrust into the area selected, previously anesthetized, are all that is required for the "one second" procedure. The approach may be trans-abdominal, when the liver is obviously enlarged and prominent, or transthoracic, as shown later. The patient is asked to lie supine and is no longer required to hold his breath, since it would not at any rate be possible when he is semiconscious or when for some reason the sensorium obtunded. A skin incision no longer is used.

Contra-indications are practically nonexistent. The most common complications are bile peritonitis and intraperitoneal bleeding. Slight pain and discomfort at the site, or referred to the right shoulder during the transthoracic approach, were encountered, but are short-lived and without sequelae. In many cases the biopsy specimen was taken from multiple sites, especially when metastatic disease was suspected. The average specimen was two centimeters long and one millimeter in diameter. This technique was first introduced at the Memorial Hospital of Pawtucket a decade or so ago, and Menghini has been a familiar name

(Continued on Next Page)

NEEDLE BIOPSY OF LIVER

Findings in 37 CASES

| | |
|----------------------------|---|
| Normal | 8 |
| Bile Stasis | 3 |
| Cirrhosis | 8 |
| Listeria | 1 |
| Hodgkin's Disease | 1 |
| Pericholangitis | 3 |
| Infectious Hepatitis | 2 |
| Metastatic Cancer | 2 |
| Fatty Changes | 7 |
| Technical Failures | 2 |

Table 1

since, even perhaps before becoming popular in the medical literature.

MATERIAL

The case material consisted of 37 patients selected during the last 5 years, all but one at the Memorial Hospital of Pawtucket. They ranged in age from 21 to 82.

Twenty-six patients presented significant hepatomegaly. In 8 cases the liver was not palpable and in 3 was only slightly enlarged. In 11 of the 26 cases with significant hepatomegaly the biopsy was done via the abdomen, in 7 of the cases from multiple sites, and in 8 cases via the thoracic cage. Most of the patients experienced discomfort at the biopsy site, subsiding usually within 24 hours. There were only two major complications: Intra-peritoneal bleeding requiring two blood transfusions in one case, and bile peritonitis controlled by proper measures in another. Both patients were in a very advanced stage of the disease with already present cardiac and renal complications. In all cases the prothrombin activity was either normal or diminished, but in no case below 60 per cent. The serum bilirubin levels were considered unimportant. The biopsy was done in fact with serum bilirubin levels as high as 27 mg. per cent.

The results in the 37 cases are summarized in Table 1.

Two inherent weaknesses of the method emerge from these results. Biopsy in patients with metastatic carcinoma is relatively unreliable. In 3 cases with normal findings, death due to advancing carcinoma and proved by autopsy eventually ensued. 2. The small number of cases of hepatitis indicates a certain lingering indifference among clinicians towards the needle biopsy procedure in this condition.

DISCUSSION

New horizons can be envisioned for this procedure and technique. Certainly there are unlimited indications and unlimited applications.

The surgeon's dilemma, infection or obstruction, medical or surgical, when faced with jaundice, a vague clinical history and controversial laboratory results, can be quickly resolved by a rapid stroke.

The internist's puzzle also can be rapidly solved in certain cases of fever of unknown origin, a diagnosis that sounds more like a confession of defeat. On three occasions this has proved to be a valuable procedure and in a fourth, too, by exclusion. In fact, our case of *Listeria* granuloma is probably the only one of its kind, confirmed later by serological agglutination and fluorescent antibody technique. In another case demonstration of the hepatic spread of an islet cell carcinoma from the pancreas was the pay-off. In the third case Hodgkin's granuloma, completely unexpected, was discovered.

CONCLUSIONS

While the Menghini needle has been available for many years, it is worthwhile to reemphasize its value as a tool for obtaining a positive diagnosis. This is important in the continuing search for improved methods of procuring objective evidence. We have attempted to allay fear of remote complications from needle biopsy of the liver by further revamping an already simple and easy technique. In a world of increasing realism these should be welcome developments.

REFERENCES

- ¹MENGHINI G: One-second needle biopsy of the liver. *Gastroenterology* 35:190-92, Aug 58
- ²MENGHINI G: Two-operator needle biopsy of the liver. *Amer J Dig Dis* 4:682-92, Sept 59
- ³MENGHINI G: Probleme der Leberbiopsie. In WILDHERT E: *Fortsschritte der Gastroenterologie*. Munchen-Berlin, Urban & Schwarzenberg, 1960 Pp. 220-30
- ⁴MENGHINI G: La ponction-biopsie rapide du foie. *Bull Soc Med Hop Paris* 75:798-803, 9-23 Oct 59



Block Island, R. I. (winter pop. 400, summer 5,000) needs a middleaged doctor who wants to slow down. Comfortable house rent free, all utilities, subsidies from town and state \$9,300. Doctor keeps all fees.

Effect Of The Preoperative Ingestion Of Vitamin K₁ On Prothrombin Time

Hypoprothrombinemia, Rarely A Cause Of Bleeding After Tonsillectomy, Warrants Attention Where Malnutrition Is Suspected

By Francis B. Sargent, M.D., Richard F. Judkins, M.D., Vital T. Pai, M.D., and Joseph P. Bellino, M.D.

Mephyton®, vitamin K₁, possesses the same activity as naturally occurring vitamin K, which is necessary for the synthesis of prothrombin. Vitamin K is used for the correction of anticoagulant induced prothrombin deficiency, for the prophylaxis and treatment of hemorrhagic disease in the newborn, and in any case where hypoprothrombinism is present or suspected. Because of its more rapid action, phytonadione (K₁) is preferable to all other K analogues and should be available in all emergency rooms.

This study explores the value of administration of vitamin K prior to tonsillectomy and adenoidectomy

in preventing postoperative hemorrhage. It should be emphasized that, even when bleeding and clotting times, the partial thromboplastin time (PTT) test, and the prothrombin activity are normal, severe postoperative hemorrhage may occur. Fuller and Quinn⁴ report the case of a mild hemophiliac with normal prothrombin time who had a severe postoperative hemorrhage. Thomas and Arbon⁵ cite 205 cases where PTT tests were routinely done. In cases where bleeding occurred, the PTT test was not prolonged.

It has been established that the use of antibiotics in children who have diarrhea can suppress prothrombin levels. When Vitamin K₁ is given, the rate of prothrombin production is increased.

In a double blind study of two hundred patients aged 4-12 years, 5 mg. of vitamin K₁ was given daily for five successive days prior to tonsillectomy and adenoidectomy. A prothrombin activity was determined before the ingestion of vitamin K₁ and again immediately prior to the operation. The results are tabulated.

Seventy-five of the patients were private, and the remaining one hundred and twenty-five were ward or service cases.

(Continued on Next Page)

FRANCIS B. SARGENT, M.D., of Providence, Rhode Island, practicing physician, and Consultant at Rhode Island Hospital, Providence, Rhode Island.

RICHARD F. JUDKINS, M.D., of Narragansett, Rhode Island practicing physician.

VITAL T. PAI, M.D., former resident in the Department of Otolaryngology at Rhode Island Hospital, Providence, Rhode Island, now a practicing physician in Manipal, Mysore State, India.

JOSEPH P. BELLINO, M.D., resident in the Department of Otolaryngology at Rhode Island Hospital, Providence, Rhode Island.

| Private Cases Vitamin K | | | Private Cases Placebo | | |
|----------------------------|---------------|----------------|--------------------------|---------------|----------------|
| Prothrombin Activity | | | Promthrombin Activity | | |
| Pa-tient | Pre-operative | Post-operative | Pa-tient | Pre-operative | Post-operative |
| 48 | 92% | 97% | 51 | 87% | 86% |
| 52 | 52% | 100% | 54 | 82% | 69% |
| 53 | 52% | 100% | 56 | 100% | 57% |
| 55 | 57% | 69% | 57 | 60% | 64% |
| 58 | 90% | 83% | 59 | 100% | 100% |
| 60 | 100% | 100% | 62 | 100% | 100% |
| 61 | 100% | 100% | 64 | 74% | 70% |
| 66 | 53% | 80% | 65 | 74% | 70% |
| 67 | 81% | 100% | 68 | 74% | 100% |
| 69 | 53% | 80% | 70 | 100% | 100% |
| 71 | 100% | 100% | 50 | 88% | 66% |
| Table 1 | | | Table 2 | | |

| Ward Cases Vitamin K | | | Ward Cases Placebo | | |
|-------------------------|---------------|----------------|-----------------------|---------------|----------------|
| Prothrombin Activity | | | Promthrombin Activity | | |
| Pa-tient | Pre-operative | Post-operative | Pa-tient | Pre-operative | Post-operative |
| 2 | 100% | 87% | 1 | 81% | 87% |
| 4 | 87% | 87% | 3 | 100% | 100% |
| 6 | 87% | 87% | 5 | 100% | 87% |
| 8 | 100% | 100% | 7 | 100% | 100% |
| 10 | 100% | 100% | 9 | 100% | 100% |
| 12 | 100% | 87% | 11 | 100% | 94% |
| 14 | 87% | 87% | 13 | 87% | 100% |
| 15 | 100% | 94% | 16 | 100% | 100% |
| 18 | 100% | 100% | 17 | 87% | 94% |
| 21 | 100% | 87% | 20 | 100% | 100% |
| Table 3 | | | Table 4 | | |

Table 1 shows the first ten private cases to receive Vitamin K₁. Table 2 shows the first ten private cases not receiving the medication. Table 3 shows the first ten ward cases taking Vitamin K₁. Table 4 shows the first ten ward cases without the medication.

In the private cases a hospital laboratory technician drew the blood for the test five days before surgery. The surgeon drew the check-up blood just before operation. In the ward cases the blood was drawn in both instances by the hematology department of the hospital. The laboratory performing the tests was the same in all cases. Vitamin K₁ (Mephyton®) was administered by mouth in a dosage of 5 mg. daily for five days prior to surgery.

In private cases presenting with a lowered prothrombin activity the prothrombin activity regularly returned to normal. In ward cases the results were nil. Apparently the medicine generally was not administered by the mothers of these unfortunate children. In service type cases, therefore, medication should be given by injection.

The very low prothrombin levels were encountered in the children of recent immigrants (white) from Portugal. There were no abnormal findings in the twenty-odd blacks in the study.

The first 110 cases in this series were evaluated for postoperative hemorrhage. This complication was noted in three instances, none of consequence. In two cases of adenoid bleeding the hospital stay was not prolonged. The third was a five-day postoperative tonsillar hemorrhage requiring readmission to the hospital for one day only. In none of these patients was there a prothrombin deficiency. An incipient upper respiratory infection was the precipitating factor in all three cases. Infection of this type is the most common cause of post tonsillectomy and adenoidectomy hemorrhage. A routine white blood and differential count is advisable.

Liver disease which would prevent prothrombin formation would be rare in the age group involved in this study. None of the patients in this series showed a prothrombin activity at the hemorrhage level of 40 per cent or below.

CONCLUSION

In children 4-12 years of age administration of Vitamin K₁ (Mephyton®) 5 mg. daily for five days before tonsillectomy and adenoidectomy assures a safe prothrombin level on the day of operation.

It would appear, however, that routine prothrombin determination or vitamin K₁ administration are not indicated in the average preoperative tonsillectomy and adenoidectomy patient. Only in patients with suspected malnutrition is such an examination indicated.

REFERENCES

- ¹GOODMAN LS, GILMAN A: **The pharmacological basis of therapeutics**. Third edition. New York, Macmillan, 1965
- ²UDALL JA: Don't use the wrong vitamin K. **Calif Med** 112:65-67, Apr 70
- ³SUTTIE JW: Control of clotting factor biosynthesis by vitamin K. **Fed Proc** 28:1696-1701, Sep-Oct 69
- ⁴FULLER AM, QUINN JA: Post tonsillectomy and adenoidectomy hemorrhage; report of an unsuspected case of "mild" hemophilia A. **Arch Otolaryng** 991:2996-2998, Mar 70
- ⁵THOMAS GK, ARBON RA: Preoperative screening for potential T & A bleeding. **Arch Otolaryng** 91:453-456, May 70

124 Waterman Street
Providence, Rhode Island



Recent Developments In Laser Technology Of Interest To The Practitioner

Application Of Laser Techniques To Medicine Must Await Advances In Allied Disciplines

By Leon Goldman, M.D.

It is of considerable interest now for the practitioner to know about some of the modern developments in laser technology. Many are familiar with the use of the laser in ophthalmology and current research in laser surgery. These will be discussed later. However, recent advances in laser technology should be of interest not only to those practitioners who are concerned with occupational medicine and the military but also to those interested in the world of today and tomorrow.

It is now ten years after the discovery of the laser. While some advances in applications are spectacular, outside of the military it is still having a difficult time. "The areas where lasers have attempted to make their initial inroads are some of the most conservative, tradition-bound sectors of

LEON GOLDMAN, M.D., Cincinnati, Professor and Chairman, Department of Dermatology, University of Cincinnati College of Medicine; and Director Medical Laser Laboratory of the Medical Center, University of Cincinnati.

From The Medical Laser Laboratory, established by the John A. Hartford Foundation at the Children's Hospital Research Foundation of the Medical Center of the University of Cincinnati.

Reprinted from the September 1970 issue of the Ohio State Medical Journal with the permission of the publisher and author through an arrangement with the State Medical Journal Group.

American industry—medicine, metalworking, surveying." *Electronic Products Magazine*, November 1, 1969, p. 120). The cardinal rule, not only in industry but in our research, has been, "If you don't need the laser, don't use it." However, in the military, holography, communications, and computers, and recently in art, lasers are finally showing their specific merit.

THE LASERS

The practitioner should be aware, especially since the high school physics student already knows that there are many lasers, not just one. They vary all the way from the ultraviolet far into the infrared. They are beams of light produced by stimulated emission of radiation. All are strong and precise. Their efficiency is low. For high-output systems, tremendous electrical energies are needed. For low-output systems, as in the new experimental laser cane for the blind, self-contained small battery units supply the power for the gallium arsenide lasers in the cane. Lasers vary in size from the tiny gallium arsenide to the huge carbon dioxide laser requiring a special for the instrument area.

Additional recent developments, essentially for research instrumentation, are of interest since these instruments do not need such expensive setups. An example is the chemical laser, where the self-contained chemical reaction produces the

(Continued on Next Page)

stimulation for laser emission. Tunable lasers, that is, those developing any frequency desired from a single type of instrument, paper feasibility work on x-ray laser systems, and the role of the laser in thermo-nuclear fusion experiments are but a few of the current studies. The most significant is the thermo-nuclear fusion phase. This is done by providing very hot plasma needed to initiate such a reaction in deuterium. This brings the laser into the field of nuclear medicine. In this connection, much paper (and bench?) work is being done on the possibility of stimulating emission in the x-ray region of the spectrum to produce x-ray lasers. Such instruments, fortunately, are not available today. Although these would furnish third-dimensional x-ray pictures and details of the molecular structure of matter, their destructive powers would be beyond comprehension. The tunable dye lasers will become very popular.

SAFETY

All are familiar with the Apollo II experiments, with the use of retroreflectors on the surface of the moon reflecting back Q-switched ruby (red) and pulsed argon (blue-green) laser beams. This is the area of communications and is of interest to the military as well as space programs. There is increasing concern among the public about the hazards of lasers in atmospheric propagation of these beams. The hazards concern eye damage. Patients may ask practitioners about this. How strong are these laser rays which go to the moon and are reflected back? In our current research with Q-switched ruby lasers for the treatment of tattoos, we are using Q-switched ruby, with energy densities 6 to 14 joules per sq. cm. Similar laser systems, used to impact the retroreflectors on the moon, are approximately twice as strong as these. As these are projected high in the sky, they diffuse rapidly as they reach the moon. Then they are to be reflected back and are weak, but strong enough to be detected only by special instruments. It is assumed that, even for aircraft pilots who fly high, or their passengers, the eye exposure to such laser beams is not excessive. A warning was issued recently to pilots in regard to the laser irradiation from the McDonald Observatory near Fort Davis, Texas. More work is being done on this phase because of the increasing use of lasers for tracking, ranging, and even communications. Current experiments are being done in detailed safety programs at present. In brief, then, there are no hazards to the public. It is necessary to repeat, that in the use of any

laser system eye protection is most important. Detailed studies have been done on guidelines for safe exposures of the eyes and also of the skin.

Another current phase of the atmospheric propagation of laser systems is the new field of the laser as a visual art. This is being studied extensively for the first time at the Cincinnati Art Museum. Here, artists are working with the laser in design, holography, interferometry (pictures of interference patterns by lightwaves), sculpture, and photography. Detailed testing has been done to assure the safety of such techniques, especially for the artist himself and for the general public. Tests by the Laser Laboratory, by the Bureau of Occupational Safety and Health of the U.S. Public Health Service, and the Cincinnati Health Department have established the safety of this for the viewing public. The toxicity of the thermal decomposition products in laser sculpture in plastics is also of concern.

HOLOGRAPHY

A fascinating and important field of current laser technology is holography, third-dimensional imagery without the use of lenses or cameras. A picture of interference patterns, hologram, in film or glass, when viewed with proper illumination shows in space a third-dimensional image. Even multiple colors are possible. This hologram is produced by the marked coherency of the laser beam. Eye hazards are present in the development of the hologram and, when lasers are used for illumination, in the reproduction of this. However, there have been such advances in technique that often the laser is not used for the reproduction of these fascinating images in space, just ordinary light and, at times, ordinary polychromatic light sources. This technique of holography is being developed for signs in the air along highways and turnpikes, and in factories. Fascinating stress patterns may be shown in metals. In data recording, holography has made it possible to store "two and one-fourth million bits per square inch." It is believed possible to increase this to "six million bits per square inch." RCA has announced recently a color tape cartridge and cartridge player for a TV set to be available in 1972. A holographic image is put on a vinyl tape. Color reproduction is done through gratings superimposed on the hologram. A two-milliwatt helium laser reconstructs the hologram and a TV camera also in the playback unit attached to the television set picks up the laser reconstructed hologram. How this will turn out in comparison with its

rival, electronic video recording technique, remains to be seen. The special image reconstruction attachment of RCA will be enclosed, so, even though a low-output laser is used, there will be no hazard of laser radiation for the viewer. Also, modern color television sets are constructed with minimal hazards of x-ray radiation exposure for the viewer and also for the TV service man.

Holography is used in our laboratory to study third-dimensional patterns of strains and stresses on bones. In biology, holographic microscopy is used to develop third-dimensional images of the growth patterns of the living cell. The laser attached to a microscope may be used for spectroscopy of living tissues, cells and even intracellular components. This is done without complete destruction of the tissue or even the cell. For the future, the hospital laboratory will be able to do detailed analyses of calcium, phosphorous, iron, and other substances from small drops of dried blood. The argon laser attached to a microscope now can also do microsurgery, even on selected areas of larger chromosomes. A whole new field of cellular biology is now being developed. Acoustical holography, a combination of ultrasound and laser holography, is being used to produce third dimensional pictures of the inside of solid objects. This is under study now for visualizations of bones and tumors.

INDUSTRIAL APPLICATIONS

Current developments in industry include also the use of the laser in metal work, welding, cutting, and drilling. Most of these are in closed systems, where the reflectant beam from the laser and where the metal plume particles from the laser reacting in metals present no hazards. However, if such metal drilling and working is done out in the open, those in industrial hygiene and occupational medicine must be concerned with the hazards for the eye and skin, and for air pollution. In spite of the increasing frequency of use of the lasers in industry, relatively little is known of the hazards from material processing.

Other applications of the laser in industry include the helium-neon laser for measuring and for directional use for lining up pipe laying and tunneling. Most of these lasers are not strong, but direct beam visualization should not be done. Weak infrared laser systems are under study in the automobile industry as types of radar systems and warning systems for obstructions ahead or in back. In any area of occupational medicine, detailed knowledge of the process must be ac-

quired both by the doctor and by the industrial hygienist.

Another concern in laser safety of interest to the practitioner is the use of laser kits by the hobby crowd, often without adequate warning about the eye hazards. Some of these laser kits provide for fairly high output lasers, especially with the ruby laser systems. Complete lasers are now being advertised for purchase by the lay public. Some of these do not provide for adequate safety precautions. There is now legislation at the federal level, and in some areas at state levels, for detailed protection from lasers and for registration of lasers. On January 16, 1970, the Federal Radiation Control Act (PL 90-602) became effective. This new law concerns, in addition to lasers, x-rays, TVs, microwave ovens, electron microscopes, vibrators, and oscillators. A special teaching course on laser safety by the Laser Laboratory of the Medical Center of the University of Cincinnati, is scheduled for March, 1971. Following this, the Department of Continuing Education of the College of Medicine of the University of Cincinnati will offer a course in applications of the laser for those doing research in biology, medicine including all surgical specialties and for dentistry. This will be in April, 1, 2, 3, 1971.

MEDICAL APPLICATIONS

Briefly, the current status in laser medicine of interest to the practitioner includes significant advances in laser surgery of the eye, now with the argon laser, and especially in laser treatment of progressive diabetic retinopathy and mainly in the juvenile diabetic. Such laser surgery prevents extensive spread of the damaging neovascularization induced by hypoxia. There is now in production a new green-light laser photocoagulator for the eye. This is the frequency doubled yttrium aluminum garnet (YAG) laser, 530.0 nm. The argon laser may be more constant in its output and more flexible.

Laser surgery in man continues to be used for tattoos, especially with Q-switched laser systems. For the laser treatment of the resistant port wine birthmark lesions, children are now being treated under general anesthesia. Because of the primitive quality of the current laser instrumentation, only small linear port wine spots can be treated in a practical fashion; the large ones require many treatments over long periods of time. Melanoma, rarely primary, continues to be treated by the laser. The serious prognosis of widespread

(Continued on Next Page)

metastases still remains, although the local lesion itself, accessible or made accessible to the laser beam,, can be treated effectively. The laser may be used as an adjunct to radiation and cancer chemotherapy. In man, local melanoma can be treated without the dissemination of melanoma foci from the impact area of the pulsed laser. Such local spread does occur in melanoma animal tumors. Multiple basal cell epitheliomas continue to be treated with the laser. Laser epilation is also under investigation and pilot instruments are now available for clinical research. Laser transillumination is being studied for studies in the infant, for the diagnosis of soft tissue tumors, and for cancer work and is being compared to x-ray mammography and xerography. Laser colposcopy is now under investigation in our laboratory for the research and development of instrumentation for more effective visualization and therapy of pre-invasive carcinoma of the cervix. Similar instrumentation is being developed for early cancer in other accessible areas such as the buccal cavity.

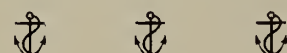
In our laboratory, laser cardiovascular surgery with the CO₂ laser has been done by Siler, Holper and Naprstek in dogs. This type of laser system has been used all the way from the thoractomy to the inside of the heart without other instruments for control of bleeding. One phase of this work has been the production of a precise test model system for partial or complete heart block. Siler, Director of Laser Surgery, Holper and Naprestek are doing extensive studies in high output in CO₂ laser hepatic surgery of the dog to establish the parameters of such important surgery. This is of interest now because of the increasing frequency of liver damage from seat belt injuries from deceleration in automobile accidents. Similar studies are being done by Wangenstein and his associates at Minnesota. Here, studies are under way also in experimental gastric surgery by Goodale. Hobeika, of the Division of Otolaryngology and Maxillofacial Surgery, has been using the laser for investigative laryngectomy and hypophysectomy in dogs. Jako and String are also doing studies in laser otolaryngology. Stellar is using the carbon dioxide laser for experimental laser neurosurgery and for excision(?) of experimental burns. Bone fusion by CO₂ laser for bone grafting is under study by Miller of the Department of Orthopedics.

All of these studies in our laboratory have been connected with the American Optical CO₂ laser. developed by Polanyi at American Optical Co. Basic studies on laser surgery and wound healing have been carried out by Hishimoto, also of our Laser Laboratory.

A detailed program of safety for laser surgery has been established by Altemeier, Siler, and Fidler in cooperation with the staff of the Laser Laboratory. The Laser Laboratory of the Medical Center of the University of Cincinnati has been the center of studies on laser safety and, with the U.S. Public Health Service, has initiated two international conferences on all phases of laser safety. A third conference to include also microwaves and ultraviolet light is planned with the U.S. Public Health Service in 1971. This conference will include also safety programs for microwave and ultraviolet irradiation. With planned programs, then, the laser is safe for the patient and the operator.

More effective instruments must be made available for use in biology and medicine. Such instruments are now available for military and industrial uses. More extensive applications of lasers for medicine must await their availability and the development of laser biomedical centers. Consequently, laser advances in biology and medicine have suffered. Only by adequate advances in laser biology and medicine can effective safety programs be developed. So again, the need for a special institute for medicine and biology is emphasized here with close and meaningful lines of communication with the multiple disciplines of physics, engineering, instrumentation, biophysics, industrial hygiene, and medicine. This is necessary for future progress of planned safety programs and for the expected advances of the laser in biology and medicine.

The practitioner, then, must be informed and kept informed. He must be able to advise his patients, who are often disturbed by sensational headlines. The laser is here to stay and advance with the help of youth and the social conscience of laser technology. This flashing darling of modern physics will help to bring a better life and better lines of communication for peoples all over the world.



Footnote To Medical History: Boerhaave, Brett, and Waterhouse

Author Locates Lecture Notes Of Boerhaave on Tercentenary of His Birth

By Robert V. Lewis, M.D.

The recent celebration of the 300th anniversary of the birth of Boerhaave (1668), the common teacher of all Europe — “*Communis Europae praeceptor*” — has brought to light an association between two very distinguished early Rhode Island physicians, Benjamin Waterhouse and James Brett. Usher Parsons in his “Sketches of Rhode Island Physicians deceased prior to 1850”,² wrote that James Brett came “from Germany, a pupil of Boerhaave, and a particular friend and associate of Redwood, who cooperated with him in establishing the Redwood Library, to which he left a portion of his books, and some are now to be found in private medical libraries in Newport”. It was natural, therefore, in the tercentenary year of Boerhaave’s birth to learn more about this student of his who came to Rhode Island. The Redwood Library seemed a fitting place for a beginning; it still has in its *Original Collection* nine volumes which were presented to it by Doctor James Brett, several of which contained his book plate and the presentation inscriptions. In the *Annals of the Redwood Library*¹ we learn that James Brett had been elected a member of the Philosophical Society as early as 1735, came to America in 1743, was a charter member of the Redwood Library in 1747, and died in 1755. The

most significant revelation in the *Annals of the Redwood Library*, however, was a statement that Benjamin Waterhouse had in his possession the original notes of James Brett taken as a student of Boerhaave at the University of Leyden in Holland.

Benjamin Waterhouse was born in Newport in 1753, two years before Brett’s death. A great nephew of John Fothergill, the celebrated London physician and friend of the American colonists, Waterhouse began the study of medicine with a preceptorship under Doctor John Haliburton. In 1775, he began his studies at Edinburgh under the first generation of Boerhaave’s students, namely, Cullen, Black and Monroe.³ Following this, Waterhouse went to Leyden where he received his degree. Leyden was celebrated for its medical school, its Boerhaave, and its Botany. It is no small wonder then that Benjamin Waterhouse after his Leyden education was named professor of Botany at Brown University in 1784, or that he should have had a lively interest in obtaining the lecture notes that James Brett had taken while a student of Boerhaave a generation earlier. He realized their importance.

To find these lecture notes alleged to have been in the possession of Benjamin Waterhouse a century and a half ago seemed a worthwhile arbeit. The search began and ended in the Benjamin Waterhouse collection in the Rare Book section of the Countway Library of the Harvard Medical

(Continued on Next Page)

ROBERT V. LEWIS, M.D., *Physician, Department of Medicine, Rhode Island Hospital; President, Rhode Island Society of Internal Medicine.*

School. Brett's original notes written in Latin and Greek were easily located with the kind assistance of the Rare Book Librarian, Mr. Richard Wolfe. These notes now reside there beautifully bound and in a superb state of preservation. One would conclude from reading them that Boerhaave literally read his "Institutiones Medicinae" to his students, since Brett's notes follow Boerhaave's printed textbook of medicine so closely.

How these notes got into Waterhouse's hands still, however, remains a mystery. Waterhouse was but two years of age in 1755 when Brett died; but Brett's widow survived him by many years until 1799. Despite the fact that most of Brett's library was given to the Redwood or disbursed into private libraries in Newport, it is quite possible that these personal notes were retained as a memento by Brett's wife and either given to or purchased by Benjamin Waterhouse, a native of that city, during the twenty years after his return to America. The donation of these notes to Waterhouse would be a philanthropy of which both James Brett and his wife Mary could be capable; for it was Mary Brett who founded the first free school for Negro children in America in the city of Newport in 1773 and was one of its first teachers.

Locating and reading this rare and treasured collection of lecture notes truly brought Rhode Island in a personal way to the celebration of the 300th anniversary of Boerhaave's birth; James Brett was a personal pupil; Benjamin Waterhouse studied in Edinburgh under Boerhaave's first generation of teachers, Monroe, Cullen, and Black; and Waterhouse received his degree from Leyden itself.

Following the great teaching tradition of Leyden, Waterhouse became Professor of Botany at Brown University and Professor of the Theory and Practice of Medicine in the Harvard Medical School. Rhode Island is a very small state but, through Brett and Waterhouse, it took part in a very small way in the Boerhaave tercentenary.

REFERENCES

- ¹MASON, GEORGE CHAMPLIN: Annals of the Redwood Library and Athaenaeum, Newport, R.I.; Newport, R.I. Redwood Library, 1891
- ²PARSONS, USHER: Sketches of Rhode Island Physicians, Deceased Prior to 1850, Providence: Knowles, Anthony & Co., Printers, 1859
- ³GOLDOWSKY, SEEBERT J.: The Beginnings of Medical Education in Rhode Island, **Rhode Island Medical Journal**, 38:496, September 1955



To All Authors:

PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

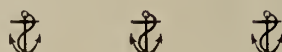
Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in INDEX MEDICUS giving author (co-authors up

to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.



Editorials

HEALTH CARE FOR THE POOR

The providing of adequate health care for the poor and medically indigent is a difficult and continuing problem. The Office of Economic Opportunity recognized this problem in a 1966 Amendment to the OEO Act of 1964. This Amendment authorized OEO to fund health facilities designed to provide medical care to large numbers of the poor who for one reason or another had been deprived of such care. The facilities were to be located in areas where the poor resided, and maximum use was to be made of existing medical care facilities. Furthermore, the poor were to participate in the decision making elements of the new system, and the system was to ensure employment as sub-professionals, educational opportunities, and supportive services for some of the clients of the system.

As one direct result of the Amendment, the local Community Action Agency, Progress for Providence, organized and implemented nine neighborhood health centers in each of the nine Target Areas of PFP. These nine Areas were defined as loci of poverty on the basis of several socio-economic and demographic variables. The centers opened at various times between 1966 and 1967. Each center had its own board composed of representatives of the poor. These boards participated in the allocation of PFP resources earmarked for the centers.

The centers were conceived as having the dual concerns of treatment of illness and preventive medical care. Each adult patient was to be offered a complete history and physical examination with chest x-ray, blood, and urine examinations, electrocardiograms for men over thirty and women over forty, and a cancer smear test for all women over eighteen. A complete immunization program was to be offered to all children using the centers. The Rhode Island State Department of Health also transferred some of its traditional programs, such as accident prevention, well-baby services, immunization, diabetic detection, family planning, venereal disease treatment, vision screening, and prenatal and postpartum care programs to the centers.

Each health center is open about 8 hours a day, five days a week. A registered nurse is on duty at all times, assisted by two full-time and one or more part-time nurses' aides. Physicians, two-thirds of whom are house interns or staff residents, are

employed to see patients on an hourly basis. Appointments for these physicians are scheduled by the nurses or aides.

It is relatively clear that the health centers have achieved some measure of success, at least in building up a clientele of poor who use what services the centers provide. The budget of the centers has increased from about \$300,000 in 1967 to almost \$850,000 in the 70-71 fiscal year. During the last 12 month period for which data are available, the centers supplied about 28,000 units of service or patient visits for 12,000 individual patients. More than one-half of these units of service were for children under 16 years old, with almost 30 per cent of the visits by children under six years of age. About 60 per cent of the visits were made by females, and slightly over 62 per cent of all services were to clients receiving some form of public assistance or welfare.

In May, 1970 the health centers were structured into the Providence Health Centers, Inc., a private, non-profit corporation with its own board of directors composed two-thirds of representatives of the poor and one-third of professionals. The professionals are mostly hospital administrators. This corporation receives funds from various funding sources, among which is Progress for Providence. Another chief source of monies is payments by the Department of Social Welfare to the corporation on a fee for services basis. Very recently the corporation was asked to submit a design for a comprehensive medical care delivery system for the City of Providence with a promise of about \$2 million in April of 1971 to implement such a system upon its acceptance by Federal authorities in OEO.

This newest definition of the scope and type of service to be provided by the neighborhood health centers poses several questions which need to be answered if an optimum medical care delivery system is to be established in Providence. Some of these questions are the following

1. How many and what type of physical facilities must be available to implement the system? Although the present centers are fairly well located, and appear to be clean, moderately well equipped, and pleasantly furnished, they are relatively small in size and limited in function. Some centers have less than 500 square feet of service

(Continued on Next Page)

space, and have facilities for only minimal ambulatory medical care. Many laboratory procedures and essential diagnostic routines must be contracted for outside the center with an accompanying delay in obtaining results of the tests.

2.. What levels and quality of medical care will be provided in the centers? Most of the physicians now working at the centers on an hourly basis are interns or residents. Referrals are being made to various specialists as indicated. The centers must decide whether to continue such referrals to private physicians or to provide competent consultation within the system.

3. Will the centers provide a service not now available to the poor, or will they interpose a competitive alternative to already existing health service systems? Evidence exists that clients of the neighborhood centers seek multiple sources of health care, including private physicians, outpatient clinics, or both. The centers must define the scope of the services which they will provide to the exclusion of comparable competitive services.

4. Will the centers actually provide employment, education and training, and supportive services for their clients? If this new system does not make adequate provision for the training and employment of para-professionals, together with the types of supportive services which will enable the poor to engage in such training and employment, then the system will become merely one of several health care providers, and the key element of comprehensiveness will be lost to the system.

5. Will the centers be so designed as to guarantee comprehensive health care together with the comprehensive medical treatment for the entire client family? At present private physicians deliver more than one half of all the medical care received by the poor. Will the new system guar-

antee to supply all of this medical care? Should Providence Health Centers, Inc., a non-profit corporation, after having been founded by large grants from the Federal Government and from other sources, receive public support from the City administration and perhaps duplicate payments for client services from the Rhode Island State Social Welfare Department in a manner not available to other non-profit corporations.

6. Will ancillary elements of the present health care system be incorporated into the new health centers design? With the recent reincorporation of the Health Centers and the entry of the hospitals into the planned "Network of Health Centers for Providence", will the health centers become merely "Band-Aid" outpatient departments of the hospitals with a minibus serving to provide communication between what is essentially battalion aid stations in the ghetto and the emergency room in the hospital? The complexities of this arrangement are enormous. With the poor client running to the hospital for laboratory tests, x-rays, drugs, and other high priced services, will the end result be improvement or bankruptcy for the little neighborhood health center whose original "grand design" was to replace the private doctor who allegedly left the neighborhood? Has the concept of personal and private care for the poor, provided with a dignity that might help him to relate to his community, become outdated, replaced by a keeping of the peace arrangement?

There is little question that comprehensive medical care, both treatment and prevention, should be made increasingly available to the poor in our community. The question at issue is the manner in which such medical care can best be provided. The counsel and assistance of the practicing physician are a germane and essential element to its solution.

INFANT MORTALITY COMPARISONS

Are infant mortality rates per se valid indicators of standards of a nation's maternal and child care or of a nation's health care in general? Will there be a rapid reduction in the United States' infant mortality rate as a direct result of a federalization of the system for delivery of medical care? Yes, say medical planners, would-be reformers of the present American medical "non-system", and other vocal critics of the so-called "medical establishment" in the United States.

A more thoughtful analysis of infant mortality developed in the Presidential Address of Doctor Bertram H. Buxton, Jr., read before the Providence Medical Association and printed in the February issue of this JOURNAL, and also a recent editorial in the AMA News refute the implications of such glib affirmative answers. World Health Organization authorities stress caution in comparison of infant death rates among countries and even the Swedes find comparisons between their figures

and those of the United States a ridiculous exercise. The retiring president of the Providence Medical Association described the multiple variables that influence gross rates of infant mortality and suggested that biologic, social, economic, racial, ethnic, cultural, genetic, and nutritional factors as well as nations' educational levels and a nation's reporting and statistical and eugenic practices were more fundamental to the problem of infant mortality than the standard of medical care either available or, indeed, actually provided.

Surveys have been conducted in this country which show no direct correlation of the amount and type of prenatal care with neonatal mortality rates in high risk pregnancies. Thus implication that a change in the medical care delivery system would suddenly hoist the United States into a first place tie with Sweden in infant mortality statistics is either a fraudulent maneuver or one based on ignorance. If we were to transfer the child bearing populations of New York City, Philadelphia, Washington, and the State of Mississippi to Sweden tomorrow, the resultant infant mortality for this population would not change significantly. Similarly, if we were to institute a health care system such as Sweden's to serve the above listed child-bearing population within the United States, the mortality statistics for this group would still be unaltered.

Let the idealistic prophets of infant mortality rates ponder the meaning of the following phenomena:

1) A nonwhite, premature by weight infant has a significantly better survival chance than the white premature infant in all weight group increments under 2500 grams.

2) 45 to 48 per cent of all low birthweight babies born in Rhode Island are the result of a gestation of 37 weeks or more.

3) The incidence of low birthweight babies born in Sweden is about 3 to 5 per cent lower than that in the United States. This could account for about 85 to 90 per cent of the difference between the neonatal mortality rates of the two countries.

4) Sweden's rate of therapeutic abortion is estimated conservatively as 50 per 1000 live births. This means that the products of 5,000 to 6,000 pregnancies were destroyed in Sweden but not counted in that country's perinatal nor infant mortality statistics. Yet, fetal mortality is an inevitable 100 per cent in abortion.

This array of seemingly disconnected data is presented not to confuse the issue but to underscore the complexity behind infant mortality rates which detract from its usefulness as a meaningful index of medical or health care standards.

Of course, American medicine could, quite quickly, reduce infant mortality rates by terminating all pregnancies in the United States except those of mothers who were white, married, non-smokers, Rh positive, in their twenties, of high socio-economic background, well educated, with no previous pregnancy losses nor infant deaths, in good physical and mental health, medium or tall in stature, and of medium weight. What's more, most of these women would need only minimal medical supervision even during labor and delivery. The resultant anticipated perinatal mortality of this group would be far lower than that which exists even in Sweden. Of course; but this is America.

MORE ON THE METRIC SYSTEM

According to a special study made by the National Federation of Independent Business at the request of Maurice Stans, Secretary of Commerce, the nation is slowly inching toward the metric system. The biggest apparent impetus to the trend to substitute meters for yards, feet, and inches is the growth of the import business, especially in the field of autos, motorcycles, and office machinery.

The survey was made among the Federation's more than 2,000 District Chairmen, with a response rate of almost 50 per cent. The survey results indicate little support for a sudden change-over in the system of measurements. While 9 per

cent hold no opinion on the matter, 23 per cent feel that the use of the metric system should be left to the discretion of the individual business, and 67 per cent think the change-over should be a nationally planned program extending over a period of years, with emphasis on using the metric system first started in the schools. This represents a change in thinking from a 1965 survey in which 41 per cent of members favored changing-over to the metric system, while 54 per cent opposed, and 5 per cent were undecided.

Most druggist respondents report that they have already changed over to the metric system, using

(Continued on Next Page)

milligrams instead of grains. Medical science and practice have already largely changed over. The physical and biological sciences have long since made a complete transition.

Many retailers who handle foreign cars and motorcycles, tractors, and even office machinery report that the metric system is essential to them, often requiring for service two separate sets of tools.

Some printers report foreign made presses require a knowledge of the metric system. Tire dealers generally report that sizes of tires are going more and more to metric measurements.

A number of retailers report that they are changing packaging of goods from dozens to packages of ten, and at least one department store reports changing over the employee time card system to use of the Navy system of 24 hours to the day with fractions computed in tenths.

On the opposite side there are many who ex-

pensive for many enterprises. Many of those involved in the sale of property state that a change to the metric system would require a complete press the opinion that a change-over would be too change of all existing real estate maps and records.

A retailer reports that one of the larger American shoe manufacturers is now sizing certain types of men's shoes by the metric system.

While some respondents register objections on the basis that "there's no need to change," or "I'm too old to learn a new system," others take the position that the change-over is inevitable and that the only concern is making a gradual change in a manner that will not be too costly to the business community.

Senator Claiborne Pell of Rhode Island has long been working for a change-over and has supported a study now in progress. There seems little doubt that the transition ultimately is inevitable.

WELL DONE!

The Disaster Committee of the Rhode Island Medical Society has been conducting continuous training programs for the state's rescue squad workers and hospital personnel. The physician members of the Disaster Committee are conducting these courses at Rhode Island Hospital (and previously at The Miriam Hospital in Providence,) the Kent County Memorial Hospital in Warwick, the Fogarty Hospital in Woonsocket, the Memorial Hospital in Pawtucket, and at the South County Ambulance Corps and the Westerly Ambulance Corps buildings in those communities.

To supplement these courses which were planned for the intensification of training in the Management of Emergency Medical Injuries, an all-day conference on Extrication and the Management of Victims at the Scene of an Accident was held on the Kingston campus of the University

of Rhode Island. The conference attracted two hundred rescue squad workers and ambulance personnel. The committee also sponsored a recent Ice Rescue Demonstration which one hundred and seventy-five attended.

The work of the Disaster Committee of the Rhode Island Medical Society is a model of physician involvement in community affairs. The Committee has blazed a path of excellence which other Society committees may well follow. Needing no Madison Avenue huckster to promote its image in the community, the Committee under the leadership of Doctor Robert L. Conrad has been its own public relations wellspring. Certainly those who have benefited from the indoctrination provided by the physicians participating in the program are its best advocates. We congratulate the Disaster Committee for this significant accomplishment.



These photographs were inadvertently omitted from the article published in the February issue of the Rhode Island Medical Journal. The editors regret this error. The author's reprints will contain these corrections.

The Rubinstein-Taybi Syndrome

Report Of Five Cases

Investigations Have Revealed No Genetic Pattern, Chromosomal Abnormality, Metabolic Defect, Or Prenatal Insult

By Venetia B. Georas, M.D.; J. Brian May, M.D.;
Paul H. LaMarche, M.D.



Figure 1: Hand of Case No. 1 demonstrating broadened thumbs and widening of the distal phalanges



Figure 2: Case No. 1 demonstrating broad great toes



Figure 3: Characteristic facies as seen in Case No. 1



Figure 4: Broad and spatulad thumbs of Case No. 2
(Continued on Next Page)

WHAT IS PROFESSIONAL NURSING?

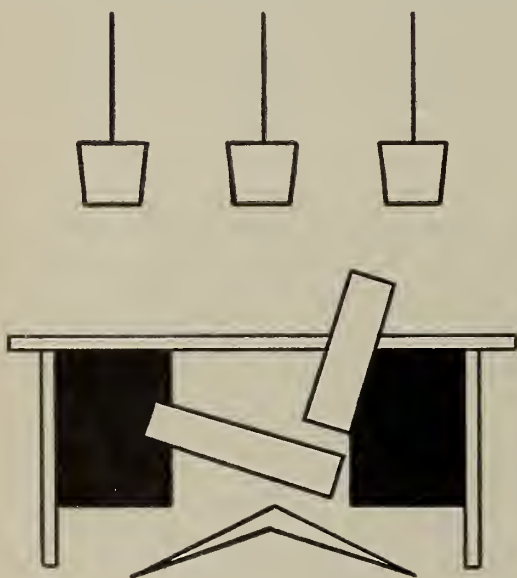
The following is the Rhode Island State Nurses' Association's official definition of Professional Nursing:

Professional nursing is a health service to individuals and groups, which is based on principles derived from the biological, physical, and social sciences. It utilizes the skills in observation, communication, and inter-personal relationships. It contributes to the maintenance and promotion of health, and to the provision of physical and emotional care, comfort, and support to the people with a variety of health needs, by: health teaching, and supervision of patients and families; teaching, supervising, directing, and participating with all members of the nursing team in identifying patients' nursing needs, developing and implementing appropriate nursing plans; collaborating with other health professionals in providing comprehensive health care; making critical independent judgments about patients and their care; and increasing and disseminating the body of nursing knowledge which enhances health care.

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228



Figure 5: Spatuladed great toes suggesting duplication as seen in Case No. 2



Figure 6: Characteristic facies as seen in Case No. 2



SCANNING THE LITERATURE

DISEASES OF THE NAILS. Method of Francesco Ronchese, M.D. In Conn F H, editor: Current Therapy, 1971. Philadelphia, W. B. Saunders, 1971. P. 562

This is a discussion of the few disorders of the nails for which therapy can be expected to be of help and of the many disorders of the nails for which there is no therapy available.



Editor's Mailbox

As Chairman of the Rhode Island Chapter of the American Academy of Pediatrics, I feel that it is both mandatory and appropriate for me to respond to the frivolous scenario entitled "Meeting" which appears on Page 45 of the RHODE ISLAND MEDICAL JOURNAL, January, 1971, Vol. 54, No. 1.

I discussed its contents with the members of our Chapter Executive Committee, and each one reacted with feelings ranging from anguish to outright disgust. At best, the scenario is in very poor taste and hardly worthy of presentation in a professional journal meant to inform and to educate. At worst, it is a crude and distorted lampoon which vilifies a respected member of our State's medical community.

The target of your flippant and cavalier presentation is dedicated not only to the job which he holds, but also, without fanfare, serves the less fortunate citizens of the community in which he lives. He is as knowledgeable, and probably more so, as any physician in the State about the problems of young people and drug abuse. His views on marijuana, moreover, are consistent with those endorsed by the American Academy of Pediatrics.

(Continued on Next Page)

Peripatetics

By Robert V. Lewis, M.D.

The Rhode Island Medical Society, in cooperation with the American Medical Association, will present two lectures on "Science and the Liver" by CHARLES DAVIDSON, Association Director, Harvard Medical Unit, Harvard Medical School, Department of Medicine, Boston City Hospital.

The lectures will be held Monday, April 19 at Brown University, and Tuesday, April 20 at the University of Rhode Island in Kingston.

* * *

FRANCIS L. McNELIS, Surgeon-in-chief, Department of Otolaryngology, Rhode Island Hospital; and ALFREDO P. ESPARZA, Associate Pathologist, Department of Pathology, Rhode Island Hospital, recently presented a talk on "Carcinoma-in-situ of the Larynx" at the Eastern Section Meeting of the American Laryngological Rhinological and Otological Society, Inc.

⚓ ⚓ ⚓



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

A careful reading of your devastating caricature also reveals the anonymous editor's (a) simplistic view of pediatrics as a specialty; (b) a disdainful image of pediatricians; (c) a "hate" motivated description of adolescents as overgrown children ages 17 to 22; and (d) a "cop-out" by the established medical community on involvement in the problem of drug abuse.

As physicians, we are, in part, if not largely, to blame for America's drug-oriented society. By our abundant and excessive prescribing of mood elevators and mood depressants, we must share some of the guilt for the severity of the drug problem. It is disgraceful to note that there is, at present, no organized medical involvement in Rhode Island to help harness the monster we helped to create. It would seem that the parody you have presented in this defamatory editorial is, in essence, a transfer of guilt from established medicine to the one man in our State who has had the courage to face up to this serious national problem.

If this editorial represents the official position of the Rhode Island Medical Society, it is indeed high time for established medicine to do some deep soul-searching about how far it has strayed from its primary and most sacred duty of giving the best possible care to the total community.

OSCAR Z. DASHEF, M.D., F.A.A.P.

Chairman, Rhode Island Chapter,
American Academy of
Pediatrics

* * *

I have recently moved to Rhode Island and was very happy to be welcomed into the State Medical Society. It is not easy for me to write this letter, since I am new to your organization and my progress in Medical Society business and politics may be jeopardized by expressing my opinion. Nevertheless, I would be less of a man unless I re-

sponded to "Meeting", page 45 of the January issue of the RHODE ISLAND MEDICAL JOURNAL.

A journal has every right to express opinion in its editorial section, but this should be done in a responsible fashion. The thinly veiled satire or allegory concerning Dr. Roswell Johnson and Brown University is not worthy of your journal. If the editorial staff of the RHODE ISLAND MEDICAL JOURNAL takes a position concerning Dr. Johnson's views, or the Brown University attitude, this position should be directly and forthrightly stated and the author should be willing to identify himself. To hide under the cloak of anonymity and satire is cowardly. Fortunately, the founding fathers of this country have guaranteed a fair trial by the sixth amendment to the Constitution which states . . . "and to be informed of the nature and cause of the accusation, and *to be confronted with the witnesses against him.*"

I do not know how Dr. Johnson or others at Brown University feel about your misadventure, but as a member of the Rhode Island Medical Society I am ashamed, and expect an apology.

JOHN R. EVRARD, M.D.

Pembroke Health Service,
Brown University

* * *

I was greatly disappointed by the poor taste in editorial policy shown in the January issue of the RHODE ISLAND MEDICAL JOURNAL.

On page 45 there is an anonymous article titled "Meeting" which, under the guise of humor, directs a rather vicious attack on Roswell D. Johnson, M.D., Brown University and the students of the class of 1970.

I regret this kind of sick humor appears to be acceptable for printing in a responsible journal.

GABRIEL A. NAJERA, M.D.

Providence, R.I.

* * *

I would like to question the propriety of printing the thinly disguised lampoon of Dr. Roswell Johnson, in the last number. His talk was on an issue about which there are obviously strong feelings and differing ideas. Dr. Johnson has had a great deal of experience, obviously has much concern and an unusual ability to communicate with the younger generation. He reported his experience and expressed his opinions in an open and public manner and would, I am sure, be willing to debate this matter:

AUTO BURGLAR ALARMS

\$7.95 up

**CUSTOM
Auto Seat Covers**

1070 Broad St., Prov. HO 1-1800

A recent report by the Director of National Institute of Mental Health to the Congress on Marijuana makes it clear there are many unsolved issues and unclear facts in this area.

I hope, in a future issue, you will afford some kind of opportunity for an illuminating and constructive interchange on this topic.

MAURICE W. LAUFER, M.D.
Riverside, R. I.

* * *

I would like to comment on what I consider to be an ill-advised, tasteless, and poorly documented editorial (sic) page 45 of the January issue of the RHODE ISLAND MEDICAL JOURNAL. I find it objectionable on a number of counts: first, it misrepresents what many of us know that particular physician believes; second, it is almost a malignant character denigration of a respected and honorable member of our profession; third, it clothes in anonymity the editorialist; fourth, it has caused hours and days of anguish to a competent doctor who I confidently believe is more aware of the drug problem and its implication than the editor-writer — whoever he might be; fifth, the scenario lacked humor when applied to the current drug problem, a problem which deserves more than this jocular approach.

The significance of the play and the actors escaped the eye of most of the people I talked with, but when they were asked to view it with our “modified pediatrician” in mind, they agreed that it was an inconsiderate, “below the belt” attack.

I accept the fact that the medical fourth estate has certain duties to expose inequities, inadequacies or inconsistencies. But, they must not defend their own bias by degrading individuals without

knowing the facts. I call on you and your editorial writer to read our doctor’s published remarks in full. Then possibly you might feel inclined to write a sequel to the dialogue or even an apology.

I would be delighted to hear your own views as an editor — on policies, on basic issues, on national and international social, economic, and health problems. But, I object to a poorly concealed attack on an individual who is living by his own lights and who has no recourse to editorial anonymity.

Possibly you would like to discuss this letter at length in your editorial space or at the House of Delegates meeting.

JOHN T. BARRETT, M.D.
Providence, R. I.

* * *

In reference to comments in the foregoing letters, no offense was intended to anyone.

The text of Doctor Roswell Johnson’s address, read before the American Association for the Advancement of Science and referred to in the letters, was known to the editors of this Journal. It is on file in the Library of the Rhode Island Medical Society. A paper titled “Medico-Social Aspects of Marijuana”, which was read by Doctor Johnson before the Providence Medical Association, was published in this Journal (RIMJ 51:171, March 1968). It was subtitled “Habituation to Marijuana Incompatible with Productive College Career”..

The National Institute of Mental Health recently submitted to Congress its first detailed report on marijuana. This report presents a balanced summary from an authoritative group of the present state of knowledge concerning marijuana.



Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE FUEL OILS

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.

RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

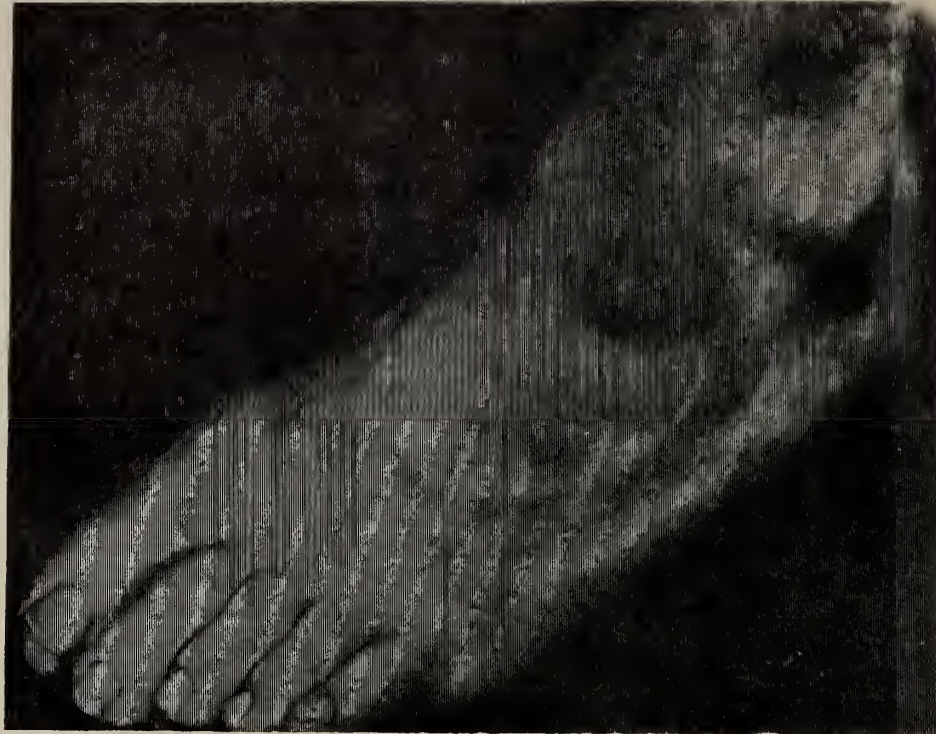
PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



Rough, brownish, baggy, indolent "tumors", of years duration, on the feet of a 30 year old man, for which biopsy was urged.

Answer on Page 170

"Hypertension Amenable to Surgical Therapy"

A Program Sponsored by

Division of Biological and Medical Sciences, Brown University

MAY 22, 1971

Friday, 21 May 1971 6:00 p.m. — Dinner meet-
of Participants. Place to be decided.

Saturday, 22 May 1971, 9:00 a.m. to 3:00 p.m.

9:00 to 9:30 a.m. — The Patient with Hy-
pertension: An overview.

Irving Beck, M. D.

Chief of Medical Services, Prov. Lying-In
Hospital

Lecturer in Medical Sciences, Brown Univer-
sity.

9:40 to 10:10 a.m. — Adrenal Medullary Tu-
mors in Hypertension.

J. Hartwell Harrison, M. D.

Elliott Carr Cutler Professor of Surgery
Harvard Medical School

Chief of Urology, Peter Bent Brigham Hos-
pital

10:20 to 10:50 a.m. — Adrenal cortical Tumors
and Hyperplasia in Hypertension.

Richard Egdahl, M. D.

Professor and Chairman, Department of
Surgery

Boston University

Surgeon-in-Chief, University Hospital, Boston

11:00 to 11:15 a.m. — INTERMISSION

11:20 to 11:50 a.m. — Renal Arterial Surgery
for Hypertension.

Chilton Crane, M. D.

Associate Clinical Professor

Harvard University

Peter Bent Brigham Hospital

12:00 to 12:30 p.m. — An Appraisal of the Re-
sults of Surgery for Hypertension.

Harriet Dustan, M. D.

Physician, Department of Medicine
Cleveland Clinic

12:40 to 1:30 p.m. — LUNCH

1:30 to 2:00 p.m. — Carotid Sinus Nerve
Stimulation for Hypertension.

Seymour I. Schwartz, M. D.

Professor of Surgery

University of Rochester School of Medicine
and Dentistry.

2:10 to 3:00 p.m. — Panel Discussions.
Schwartz.

Drs. Beck, Crane, Dustan, Egdahl, Harrison,

3:00 p.m. — ADJOURNMENT

ACUTE PERFORATION IN REGIONAL ENTERITIS

(Concluded from Page 148)

thought to cause weakened areas in the intestinal wall. While perforation generally occurs in the ileum, it has been reported in the proximal bowel, even as high as 9 inches from the duodeno-jejunal junction.¹⁰

Steroids have been used widely and generously in the treatment of both acute and chronic enteritis and enterocolitis. A high rate of perforation of the bowel has been reported to be associated with the increased use of steroids¹¹. While perforations generally occur during the acute phase of regional enteritis, perforations during the chronic stage have characteristically occurred in patients on steroid therapy.^{12, 13}

A finding of free air under the diaphragm on x-ray examination is usually sought for and frequently relied upon in the diagnosis of perforated intra-abdominal viscus. It is not, however, a frequent finding in acute perforations secondary to regional enteritis.^{6, 7} Only 3 of the 95 cases reported by Kyle⁶ showed free air under the diaphragm.

The surgical treatment in the reported cases has been varied. Simple suture, simple suture with patch graft, suture with bypass procedure or as a secondary procedure at a later date, exteriorization, and drainage procedures, as well as bowel resections, have been described. Although each of these operations may well have a place in an individual case, it appears that, whenever possible, resection and anastomosis offer the best prognosis. It also appears from the literature that, although in some cases simple suture of the perforation may be life-saving, the greatest number of postoperative deaths occurs in this group. The morbidity and mortality associated with resection and anastomosis are much less. In support of this view is the fate of the second of two cases reported by Alavi et al.,⁷ a 53-year-old female in whom perforation occurred in a bypassed loop of diseased bowel four months after an ileotransverse colostomy for regional enteritis.

SUMMARY

Acute free perforation of regional enteritis (Crohn's disease) is a relatively rare condition. It is most frequently associated with the acute phase of the disease. Perforation occurs most often at the mesenteric border of the bowel, the so-called weak point in the bowel wall at the site of the vascular supply. The resulting acute surgical abdomen may well be the initial incident in an episode of acute regional enteritis. Immediate laparotomy resection, and end-to-end anastomosis is the treatment of choice when feasible.

REFERENCES

- ¹CROHN BB, GINZBURG L, OPPENHEIMER GD: Regional ileitis: A pathologic and clinical entity. **JAMA** 99:1323-29, 15 Oct 32
- ²ARNHEIM EE: Regional ileitis with perforation, abscess, and peritonitis. **J Mount Sinai Hosp NY** 2:61-3, Jul-Aug 35
- ³HALLIGAN EJ, HALLIGAN HJ: Acute free perforation as first sign of regional enteritis. **Amer J Surg** 37:493-997, Sep 37
- ⁴MILWIDSKY, BARZILAY B: Free perforation and recovery in a case of regional ileitis. **Gastroenterology** 27:113-20, Jul 54
- ⁵CROHN BB: Indications for surgical intervention in regional ileitis. **AMA Arch Surg** 74:305-11, Mar 57
- ⁶KYLE J, CARIDIS T, DUNCAN T, et al.: Free perforation in regional enteritis. **Amer J Dig Dis** 13:275-83, Mar 68
- ⁷ALAVI IA, PRINTEN K, STEIGMANN F: Free perforation in chronic regional enteritis. **Amer J Dig Dis** 14:420-3, Jun 69
- ⁸CROHN BB: The pathology of acute regional ileitis. **Amer J Dig Dis** 10:565-72, Jun 69
- ⁹WAYE JD, LITHGOW C: Small bowel perforation in regional enteritis. **Gastroenterology** 53:625-29, Oct 67
- ¹⁰GARNER BO, CLAUGUS CE, HAMILTON JE: Acute perforation of jejunum secondary to primary jejunitis. A case report. **Ann Surg** 134:131-4, July 51
- ¹¹BRILL CB, KLEIN SF, KARK AE: Regional enteritis and entero-colitis: A study of 74 patients over 15 years. **Ann Surg** 170:766-74, Nov 69
- ¹²COLCOCK BP, FORTIN C: Surgical treatment of regional enteritis. Review of 85 cases. **Ann Surg** 161:812-18, May 65
- ¹³SPARBERG M, KIRSNER JB: Long-term corticosteroid therapy for regional enteritis. **Amer J Dig Dis** 11:865-80, Nov 66



A COMPARATIVE STUDY OF THE TREATMENT OF THE SHAFT OF THE FEMUR BY TRACTION AND OPEN FIXATION

(Concluded from Page 146)

Emergency Room with a sinus tract and prurulent drainage, x-ray studies showed osteomyelitis of the femur.

SUMMARY AND CONCLUSIONS

A comparative study of 132 fractures of the shaft of the femur is reported. Seventy fractures were treated with Russell traction, balanced suspension, traction, or skeletal traction; and 62 with open internal fixation. Patients ranged in age from 14 to 82 years.

Open fixation offers some advantages over long term traction methods. The period of immobilization and the length of hospitalization were shorter in the operative cases. The final range of motion of the knee was better and ambulation permissible at an earlier date. Infection is the only major drawback to open surgery of femoral fractures.

In the conservatively treated patients skeletal traction with balanced suspension was found to be the best form of conservative treatment in the cases reported. Nursing care is greatly facilitated in these cases. Drawbacks are pin tract infection, thromboembolism, and refracture.

Our experience indicates that intramedullary fixation should be largely reserved for patients over twenty-two years of age. Patients under the age of 16 respond well to conservative traction treatment, the method of choice in this age group. For patients in the age group of 16 to 22 years treatment is determined on an individual basis.

REFERENCES

- ¹GARRISON FH: **An introduction to the history of medicine.** Fourth Edition. Philadelphia, W. B. Saunders Company, 1929. P. 157.
- ²BRAV EA, JEFFRESS VH: Fractures of the femoral shaft. A clinical comparison of treatment by traction suspension and intramedullary nailing. **Amer J Surg** 84:16-25, Jul 52
- ³(KUNTSCHER G) BICK EM: The intramedullary Nailing of Fractures by G. Kuntscher. Translation of article in **Archiv fur Klinische Chirurgie**, 200: 443, 1940. **Clin Orthop** 60:5-12, Sep-Oct 68
- ⁴RUSH LV, RUSH HL: A reconstruction operation for comminuted fracture of the upper third of the ulna **Amer J Surg** 38:332-333, Nov 37

⁵GROVES EWH: **On modern methods of treating fractures.** New York, William Wood & Company, 1916 P. 360

⁶SCHNEIDER HW. Use of the 4-flanged self-cutting intramedullary nail for fixation of femoral fractures. **Clin Orthop** 60:29-39, Sep-Oct 68

⁷WATSON-JONES R, et al.: Medullary nailing of fractures after fifty years with a review of the difficulties and complications of the operation. **J Bone Joint Surg** 32-B:694-729, Nov 50

⁸FUSSELL E: An eight-year study of the treatment of diaphyseal fractures of the femur. Paper read at the Second Annual American Orthopaedic Association Resident's Conference. Oklahoma City, March 24-25, 1969

⁹ANDERSON RL: Conservative treatment of fractures of the femur. **J Bone Joint Surg** 49-A:1371-1375, Oct 67

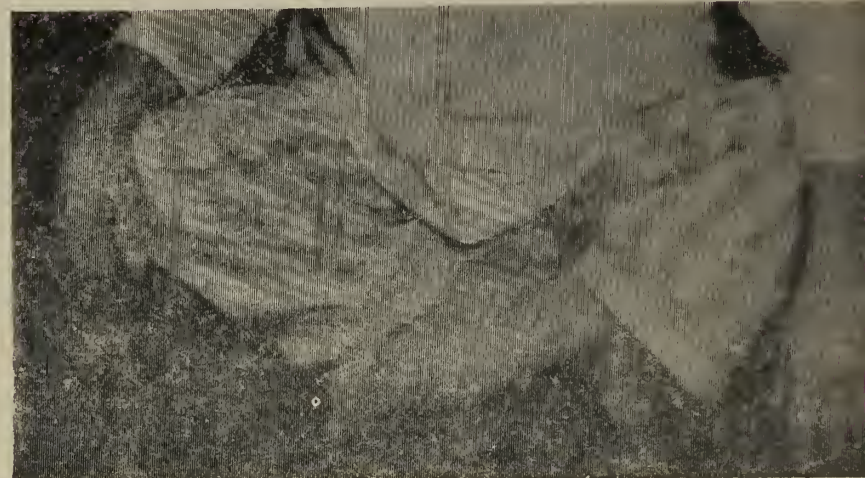
¹⁰McKEEVER FM: Fractures of the shaft of the femur in adults. **JAMA** 128:1006-1012, 4 Aug 45

205 Waterman Street
Providence, Rhode Island 02906



DERMAQUIZ ANSWER

(See Page 168)



The man is a linoleum setter and sits all his working hours in the so-called Hindu position. Protruding bones pressure produces the CALLUS. An occupation mark. This can be seen occasionally in children who like to sit for hours in the Hindu position.

Many chemicals are dangerous. That's why warnings are printed on labels. But accidents can happen. The fastest way to find the proper antidote or treatment is to call your local Poison Control Center. Write to us: Chevron Chemical Company, 200 Bush Street, San Francisco, California 94104. And we'll send you a HEW directory of local phone numbers and addresses. It'll save you time. And maybe patients.

BOOK REVIEWS

(Continued from Page 137)

Anxiety, sometimes equated with premenstrual tension, peaks in the late luteal phase and drops just before menstruation. The common denominator for postpartum depression and premenstrual tension is the rapid withdrawal of progesterone from the circulation.

Stress is intuitively understood by professionals and laymen alike. The influence of the higher perceptual centers on the hypothalamus, and thence via the pituitary to target hormonal organs, or directly through neuronal networks to the autonomic nervous system, is well appreciated; but understanding and quantitation is slow to come in many commonly observed clinical syndromes. Stress ulcer mediated by way of the adrenal cortex, the adaptation syndrome of Selye, and the amenorrheas resulting from stress, especially acute psychic trauma most commonly seen in war situations, are all behavioral patterns. Follicle stimulating hormone and estrogens may be low, and then return toward the normal paralleling improvement in the psychiatric status. The thyroid plays no role, but the uterus in psychogenic amenorrhea seems refractory to the usual levels of circulating estrogens. Pseudocyesis may be biologically inherited since it is a normally occurring phenomena in rats, mice, and hamsters after cervical manipulation. The pituitary-adrenal axis must be in balance.

Conditioning under stress results in an outpouring of ACTH, which results in a delay in adaptation. Does it not then naturally follow that the gluco-corticosteroids, which ACTH stimulates, should act in the opposite direction, namely to facilitate extension and accelerate adaptation? Furthermore, stress in the usual sense results in marked increases in the outpouring of catecholamines in the urine. But, curiously enough, increases in catecholamine excretion may be evoked by positive, pleasure evoking amusements; experimental situations evoking responses of calmness and equanimity, however, distinctly lower the urinary catecholamines. The usual concomitants of stress, namely changes in the electrocardiogram and blood free fatty acids, were all confirmed by Lennart, Levi, and Stockholm. Depression may or may not be associated with increases in cortical secretion, but many patients show an increased cortisone secretion during the acute phase of their depression. The clinching experiment which dis-

proves the cortical relationship between depression and steroids is the demonstration that patients with total adrenalectomies on fixed daily dosages of steroids show all the typical signs of depression, including response to electric shock therapy without the slightest change in their cortical function. Indeed, the increased cortisone excretion in the depressive state may be nothing more than the reactivity of the target organ to increased pituitary activity as the result of the stressful situation. Growth hormone, in both man and monkey, is discharged in a manner very similar to ACTH under stressful situations. Clearly growth hormone is under the influence of the hypothalamus.

Periodic phenomena in man and animals, result from a 24 hour clock implanted in the hypothalamus and a twenty-eight day cycle regulator at a brain site that Curt P. Richter of Yale has as yet been unable to localize despite years of study. In a most sophisticated and imaginative way Richter has attacked the problem of cyclic behavior of both the diurnal and monthly types. Either the short circadian rhythm or the longer lunar twenty-eight day cycles usually appear only under pathological conditions in man. These clocks are independent of any homeostatic mechanisms and independent of all external and internal stimuli. Richter isolated a group of patients suffering from intermittent hydrarthrosis with cycles ranging from seven to fourteen days. Another group had a cycle of twenty-one days with peaking of leukocyte formation in the bone marrow. Patients with Hodgkin's disease, even those not showing Pel-Ebstein fever, have a similar peaking of lymphocytes in the blood stream at approximately twenty-four days. There is a basic thirty day cycling in all human subjects regardless of their sex; the cycle may be detected by changes in mood, gross bodily activity, concentration ability, body temperature, pulse rate, electroencephalogram, urine output, hours of sleep, blood counts, and blood chemistries. Richter shows that the cycle is most clearly evident in catatonic schizophrenics, but may easily be detected as well in some manic depressives. This basic thirty day rhythm obviously is usually not detected in a normal individual, but nevertheless is inherently there.

Although not by design, Richter's article brings us again to the beginning of the book by focusing on the effect of testosterone in prenatal and neonatal life. At least in the rat, life is begun with a female brain in the male at about forty-eight

(Continued on Next Page)

hours of age; testosterone secretion submerges the cyclic mechanism in the brain for the duration of the male's life. Ovaries implanted into castrated males after forty-eight hours never establish a cyclic pattern, whereas the implantation of ovaries in adult males, if they were castrated before reaching the forty-eight hour critical period, will cause female cycling. Richter concludes that man and woman start life with female brains which remain undifferentiated until a critical age, which in the human subject is a few days before birth or immediately thereafter. Presence of even small amounts of testosterone submerge the cyclic rhythm. Although submerged, the importance of the basic thirty day cycle in human behavior cannot be minimized and may be operative in more ways than we appreciate clinically at the present time. The cycling is one and the same when it appears in manic depressive psychoses, schizophrenia, or epilepsy. It can be brought out by parathyroid and thyroid deficiencies.

The concluding paper confirms the gist of the entire symposium; maturation of nerve networks and the organization of behavior patterns occur at a very early stage of development due to hormones. By the incorporation of C14 uridine into brain RNA, organizing neuronal network activity may be shown.

Every physician will see more and enjoy more in his practice from the insights and understandings that such an interdisciplinary symposia as this can give.

ROBERT V. LEWIS, M.D.



ORGANIZATION AND DELIVERY OF HEALTH CARE SERVICES

(Concluded from Page 143)

4. Manpower skills at levels below that of physicians appear destined to increase markedly, and the increasing use of physician assistants in such tasks as making house calls, supervision and provision of well child services, and adult health maintenance is likely.

Finally, your State Department of Health will also change. For in the future it will take a more aggressive role in health systems design and health systems change.

CONCLUSION

One way or another, we all sincerely desire the best possible health care for the people. Despite reservations related to our own profession, our own institution, our own department, or our own self-interest, our mutual goal nevertheless is to provide equitable health services at reasonable costs to all people.



THE WASHINGTON SCENE

(Concluded from Page 132)

tion and control policy. Out of the meeting which followed came the plan for a national commission.

The following professional organizations are represented on the commission:

American Academy of Dermatology, American Academy of General Practice, American Academy of Neurology, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, American College of Physicians, AMA, ASHA, American Public Health Association, AOA, American Urological Association, American Venereal Disease Association, Association of American Medical Colleges, and NMA.



SCANNING THE MEDICAL LITERATURE

VANISHING BONES IN A CASE OF PSORIASIS. Francesco Ronchese. *Cutis* 6:10117-18. Sept. 1970.

The vanishing of the bone of one phalanx (Disappearing Bone Disease) caused the skin of a thumb to form hound-like skin folds, because the area to cover, after the bone vanished, became half and skin double the size (dermatomegaly).

rhode island medical journal

| | |
|--|-----|
| AMERICAN HEALTH CARE SYSTEM REVISITED Max H. Parrott, M.D. | 199 |
| LEGISLATIVE PROPOSALS FOR NATIONAL HEALTH INSURANCE Russell B. Roth, M.D. | 205 |
| CHOLESTEROL ABSORPTION FOLLOWING EIGHTY PER CENT SMALL INTESTINAL RESECTION IN DOGS Mark S. Hochberg, A.B. and Henry T. Randall, M.D. | 208 |
| RECTAL OBSTRUCTION DUE TO CARCINOMA OF THE PROSTATE John R. Stuart, M.D., and William S. Klutz, M.D. | 211 |
| MEDICAL COLLECTIONS AT THE AMERICAN ANTIQUARIAN SOCIETY Marcus A. McCorison | 213 |
| EDITORIALS | 215 |
| BOOK REVIEWS | 195 |
| DERMAQUIZ | 193 |
| DISTRICT MEDICAL SOCIETY MEETING | 177 |
| PERIPATETICS | 194 |
| PROPOSED NATIONAL HEALTH INSURANCE PROGRAMS | 182 |
| THE WASHINGTON SCENE | 197 |
| THROUGH THE MICROSCOPE | 221 |

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year. Second-Class postage at Providence, Rhode Island. Copyright, 1970.

District Medical Society Meeting

WASHINGTON COUNTY MEDICAL SOCIETY

The quarterly meeting of the Washington County Medical Society was held at the Larchwood Inn, Wakefield, Rhode Island on January 13, 1971.

The meeting was called to order by Dr. Louis LaPere, President, at 11:40 a.m. Members present were Doctors: Agnelli, Boyd, Burbelo, D'Agostino, Elliot, Farrell, Goldberg, Hathaway, Johnson W., Johnson L., Knisley, Kraemer, LaPere, Manganaro, MacIver, McGrath, McDermott, O'Neil, Palaia, Pinto, Potter, Pysariw, Siegmund, Tang, Valbuena, Walsh, Dow, Mohrnheim, Abramson, and McKee.

A motion was made by Doctor Walsh and seconded by Doctor Tang that the minutes of the last quarterly meeting be accepted as printed and distributed without being read.

COMMUNICATIONS

A letter from Dr. Richard P. Sexton, President of the Rhode Island Medical Society, was read regarding legislative problems at this session and the necessity for members to meet with legislators from the district to discuss health legislation.

Doctor Agnelli moved and the motion was seconded by Doctor O'Neil that a committee be appointed by the chair to arrange a dinner meeting with the legislators as has been held in the past. Doctor Agnelli and Doctor Turco were so named by the chair.

COMMITTEE REPORTS

Dr. Richard J. Kraemer gave a brief report on the actions of the council.

The financial report of the Treasurer indicated that \$1,131.81 is now in the treasury.

NEW BUSINESS

Applications were read and given to the Credentials Committee for further actions from Doctors Ashley, Falconer, Derby, and W. Jones.

Doctor Agnelli moved and the motion was seconded by Doctor Mohrnheim that the Society donate the \$1,200 in stocks to the Washington County

Mental Health Clinic as a donation to their new clinic. It was so passed by the members.

Doctor Palaia suggested that the treasurer send a book from the society to Dr. William H. Tully during his recuperation period after undergoing major surgery.

The Nominating Committee presented the following slate:

President: Dr. Mauricio M. Goldberg; 1st Vice President: Dr. Ziang T. Tang; 2nd Vice-President: Dr. Alfred Gobeille; Secretary: Dr. Francis Palaia; Treasurer: Dr. William McDermott.

Delegates: Dr. James McGrath, 2 years; Dr. F. Bruno Agnelli, 1 year; Dr. Joseph Ruisi, 3 years.

Council: Dr. Kraemer.

Executive Committee: Dr. Gordon Menzies, Dr. Louis Morrone, Dr. Erwin Siegmund.

Credential Committee: Dr. Attilio Manganaro, Dr. John Pinto, Dr. Jesse M. Gibson.

Peer Review Committee: Dr. John Walsh, and Dr. Morrone.

A motion was made by Doctor Walsh and seconded by Doctor Siegmund that the secretary cast one ballot and the slate be accepted as presented by the Nominating Committee.

Doctor McDermott discussed Mr. Selig Greenberg's articles in the Providence paper and suggested that the delegates from our society look into and discuss at the state level such publications which are against medicine and doctors.

Doctor LaPere discussed at length the highlights of the actions of the House of Delegates of the American Medical Association at its clinical session in Boston in November and December of this past year; especially, the reports of Doctor Roth in the consideration in devising an overall health plan and the report of the Council on Medical Service on the subject of the Peer Review.

The meeting was adjourned at 1 p.m.

Respectfully submitted:

FRANCIS M. PALAIA, M.D.

Secretary



Guide his hand to quality and economy

Specify
Deltasone[®] 5 mg.
(prednisone, Upjohn)

**an economical
prednisone
that's made
a name for itself**

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001





Picture of low back pain

Parafon Forte tablets help to relieve pain,
restore mobility... stop pain-spasm feedback

...this is why. PARAFON FORTE provides:

Salicylate analgesic equal to aspirin for relief of pain,² yet unlikely to cause the gastric irritation^{2,3} or increased bleeding time⁴ associated with aspirin therapy.

Skeletal muscle relaxant shown in extensive clinical studies to be useful in a variety of low back disorders⁵⁻⁷ which is not an antihistamine or tranquilizer derivative and is unlikely to produce a tranquilizing or sedative effect.⁸

Prescribe PARAFON FORTE for effective spasmolysis and anesthesia in acute sprains, strains and myalgias of the low back, including acute exacerbations of chronic conditions. Your patients will appreciate the restored comfort and freedom of movement it usually provides.

McNEIL

McNEIL LABORATORIES, INC., FT. WASHINGTON, PA. 19034



treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

Contraindications: Sensitivity to either component. **Warnings:** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. **Precautions:** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. **Adverse Reactions:** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. **Usual Adult Dosage:** Two tablets q.i.d. **Supplied:** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: *Fed. Proc.* 14:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: *The Pharmacological Basis of Therapeutics*, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: *Gastroint. Endosc.* 14:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: *New Engl. J. Med.* 282:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: *Industr. Med. Surg.* 21:372, 1962. 6. Forster, S., et al.: *Amer. J. Orthop.* 2:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: *Clin. Pharmacol. Ther.* 5:871, 1964.

*U.S. PATENT NO. 2,895,877

Proposed National Health Insurance Programs

Prepared By The Legislative Department Of The American Medical Association

AMA — HEALTH CARE INSURANCE ASSISTANCE ACT OF 1971, H. R. 4960

The AMA's proposal (Medicredit) would: (1) pay the full cost of health insurance for those too poor to buy their own; (2) help those who can afford to pay a part — if not all — of their health insurance premium, the less an individual can afford to pay, the more the government would help out; and (3) see to it that no American would have to bankrupt himself because of a long-lasting, catastrophic illness. The bill would apply to all individuals residing in the U. S.

Under the bill, the Government would pay 100 per cent of the premium for low-income benefi-

ciaries (an individual and his dependents whose combined income for a taxable year would not give rise to any income tax liability). For others, the Government would provide scaled participation ranging between 99 per cent and 10 per cent, favoring lower-income persons, in the payment of premiums for basic coverage, and would pay in full the premium for catastrophic expense coverage. A table of allowable percentages for related income tax liabilities is included in the bill.

The extent of participation would be determined with reference to the federal income tax liability of an individual in a particular year (base year). A health care insurance policy, qualified under this program, would run for a 12-month period beginning in the year following (benefit year).

A beneficiary eligible for full payment of his premium by the Federal Government would be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the Government would be sharing the cost of the premium could elect between a credit against income tax or a certificate for the allowed amount. As defined in the bill, the carrier would present certificates received in payment of premium to the Federal Government for redemption.

To participate in the plan, a carrier would have to qualify under state law, provide certain basic coverage, make coverage available without pre-existing health conditions, and guarantee annual renewal. An assigned risk insurance pool among carriers would be utilized as appropriate.

A qualified policy would offer comprehensive insurance against the ordinary and catastrophic expenses of illness. Basic benefits in a 12-month policy period would include 60 days of inpatient care in a hospital or extended care facility (any two days in an extended care facility would count as one of the 60 days). Other basic benefits would provide emergency and outpatient services and all

**The New England Society of Clinical Hypnosis
and the Oral Surgery Dept. of the
Boston City Hospital Will Sponsor A**

CLINICAL HYPNOSIS WORKSHOP

April 29 & 30, May 1 & 2, 1971

at

**Mallory Amphitheater, Boston City Hospital,
Corner Albany and Massachusetts Avenues,
Boston, Mass.**

Open To All:

**Physicians, Dentists, Psychologists in Good
Standing in AMA, ADA & APA,
Outstanding Faculty**

For Application Form and Information

Contact:

**Lawrence M. Staples, D.M.D.
P.O. Box 162
Holderness, N.H. 03245
Tel: 603-968-3322**

the night shift of depression... insomnia

Depression is a 24-hour-a-day problem. And insomnia is often its nocturnal expression. In fact, insomnia may be a key symptom in establishing the diagnosis of depression.

ELAVIL HCl (Amitriptyline HCl, MSD) may prove quite helpful when you have arrived at such a diagnosis. Unlike psychic energizers or agents that merely elevate mood, ELAVIL HCl embodies a mild antianxiety action which manifests itself even before the fundamental antidepressant activity of the drug becomes evident. Daytime drowsiness occurs in some patients, usually within the first few days of therapy.

NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.

Warnings: May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.

Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as phenazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. **Anticholinergic:** Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. **Endocrine:** Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. **Other:** Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. **Withdrawal Symptoms:** Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.

How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

when the diagnosis is depression

ELAVIL[®] HCl
(AMITRIPTYLINE HCl | MSD)

MSD MERCK SHARP & DOHME

PROPOSED NATIONAL HEALTH INSURANCE PROGRAMS

(Continued from Page 182)

medical services provided by doctors of medicine or osteopathy. The catastrophic expense protection would pay incurred expenses for benefits in excess of the basic coverage, including hospital, extended care facility, inpatient drugs, blood, prosthetic appliances, etc.

A policy purchased under this program would contain: (a) Under the basic coverage — a deductible of \$50 per hospital stay, and 20 per cent coinsurance of the first \$500 of medical expense and on the first \$509 of emergency or outpatient expenses; and (b) under the catastrophic illness provisions — a corridor, between the basic coverage and the catastrophic illness coverage, of expenses to be incurred by the beneficiaries before payments under the catastrophic illness provisions would begin. The amount of the corridor would be based on taxable income (that is, net income after all tax deductions and personal exemptions): 10 per cent on the first \$4,000, 15 per cent on the next \$3,000, and 20 per cent thereafter.

A health insurance advisory board of eleven members, a majority of whom would be practicing physicians, and including the Secretary of HEW and the Commissioner of Internal Revenue and other persons qualified by virtue of education, training, or experience, would be appointed by the President with Senate consent. The Board would establish minimum qualifications for carriers, and in consultation with carriers, providers and consumers, would develop programs designed to maintain the quality of health care and the effective utilization of available financial resources, health manpower, and facilities. It would report annually to the President and Congress. The AMA estimates that the program would cost about \$12.1 billion in new money.

HIAA — NATIONAL HEALTH CARE ACT OF 1971 — H. R. 4349

This bill has provisions relating to five areas of health care delivery. These five areas are: (1) methods to increase and redistribute the supply of health manpower; (2) the promotion of ambulatory care; (3) methods to strengthen health planning; (4) methods to improve cost and quality control; and (5) a program for financing health insurance.

In its program for providing a system of health insurance for all, the bill first would establish a minimum standard health care benefits program

to be expanded to provide full coverage by 1979, which must be included in any qualified health insurance policy. Different levels of minimum benefits would be required for private group and individual plans and for state pool plans for the poor, near poor and the previously uninsurable.

The state pool plan coverage would be more comprehensive initially. The private group and individual plans would come into effect January 1, 1973 and would include 30 days of hospital care, 60 days of skilled nursing home care, 90 days of home health care, all diagnostic x-ray and laboratory examinations on an ambulatory basis, all surgery and radiation therapy in ambulatory health care centers, three visits a year for each family member to a physician in his office or an ambulatory health care center, well baby care including immunization up to six visits during the first 6 months after birth, and charges for physician services while institutionalized.

Initial benefits under the state pool plans would begin July 1, 1972 and would be identical to those above except that six visits per year for each family member to a physician would be allowed, well baby care would include up to 12 visits during the first two years, hospitalization would be covered for the first 120 days, skilled nursing home care for the first 120 days, and home health care for the first 180 days. Additionally, dental care for children under 19, prescription drugs for all persons, rehabilitation services, maternity care and family planning services and supplies would be covered.

By January 1, 1976, private group coverage would be expanded to cover the initial state pool plan level of coverage. At the same time the state plan benefits would be increased to cover virtually all ambulatory care as well as 300 days of hospital care, 180 days of skilled nursing home care and 270 days in an approved home health care program. On January 1, 1979, the minimum benefits for the private group and individual plans would be increased to meet the above 1976 state plan level. Provisions are made in the bill for the President to defer the phase-in of benefits if he finds that there are not sufficient health care facilities and services to supply the level of benefits authorized.

The bill would amend the Internal Revenue Code to prohibit employer deductions for expenditure for employee health care unless the employer has in force a qualified employee health

(Continued on Page 187)

PROPOSED NATIONAL HEALTH INSURANCE PROGRAMS

(Continued from Page 186)

care plan. For individuals, the bill would allow an unlimited tax deduction equal to all expenses paid for insurance for the taxpayer, his spouses and dependents under a qualified individual health care plan or a qualified employee health care plan, or for a qualified state health care plan.

The bill authorizes the sums necessary to provide comprehensive health care insurance to needy individuals and families. A qualified state health care plan would be by agreement between a state and an administering carrier and would pay for the minimum standard health care benefits as they are provided. An individual or family eligible for a qualified state health care plan could request coverage under an arrangement between the administering carrier and an approved health maintenance organization. The charges to the state for this alternative coverage could not exceed those which would be made under the qualified state health care plan. The bill would limit the amount of copayments required from a needy individual or family.

The bill would establish eligibility for coverage under the state health care plan according to in-

come, \$3,000 or less for an individual, \$4,500 or less for a family of two, \$6,000 or less for others. Those determined to be uninsurable also would qualify.

The measure would allow payment, under the state health care plans, for reasonable charges only, i. e. 75th percentile for professional services and rates approved by a State Health Care Institutions Cost Committee for institutions. Cost estimates are not available for this program.

CONGRESSMAN DURWOOD HALL — EXTRA CARE PROPOSAL — H. R. 177

Congressman Hall's proposal, which he introduced on January 22, 1971, would establish two programs: to provide basic health care protection for the medically indigent and catastrophic illness insurance for all.

Part A of this proposal would replace the present Medicaid program. Each state would be authorized to determine the level of medical indigence in that state and to purchase, from private carriers, basic health insurance coverage for the medically indigent. The states would receive federal reimbursement for 85 per cent of the costs incurred in providing this basic coverage.

The states would also purchase coverage for the costs of catastrophic illness expenses for the

(Continued on Next Page)

"Hypertension Amenable to Surgical Therapy"

A Program Sponsored by

Division of Biological and Medical Sciences, Brown University

MAY 22, 1971

Friday, 21 May 1971 6:00 p.m. — Dinner meeting of participants.

Saturday, 22 May 1971, 9:00 a.m. to 3:00 p.m.

9:00 to 9:30 a.m. — The Patient with Hypertension: An overview.
Irving Beck, M. D.

Chief of Medical Services, Prov. Lying-In Hospital
Lecturer in Medical Sciences, Brown University.

9:40 to 10:10 a.m. — Adrenal Medullary Tumors in Hypertension.

J. Hartwell Harrison, M. D.
Elliott Carr Cutler Professor of Surgery
Harvard Medical School
Chief of Urology, Peter Bent Brigham Hospital

10:20 to 10:50 a.m. — Adrenal cortical Tumors and Hyperplasia in Hypertension.

Richard Egdahl, M. D.
Professor and Chairman, Department of Surgery
Boston University
Surgeon-in-Chief, University Hospital, Boston

11:00 to 11:15 a.m. — INTERMISSION

11:20 to 11:50 a.m. — Renal Arterial Surgery for Hypertension.

Chilton Crane, M. D.
Associate Clinical Professor
Harvard University
Peter Bent Brigham Hospital

12:00 to 12:30 p.m. — An Appraisal of the Results of Surgery for Hypertension.

Harriet Dustan, M. D.
Physician, Department of Medicine
Cleveland Clinic

12:40 to 1:30 p.m. — LUNCH

1:30 to 2:00 p.m. — Carotid Sinus Nerve Stimulation for Hypertension.

Seymour I. Schwartz, M. D.
Professor of Surgery
University of Rochester School of Medicine and Dentistry.

2:10 to 3:00 p.m. — Panel Discussions.

Drs. Beck, Crane, Dustan, Egdahl, Harrison, Schwartz.

3:00 p.m.

— ADJOURNMENT

medically indigent. There would be no federal reimbursement for this state coverage.

Part B of this proposal would have the Secretary of HEW establish a program of insurance against the costs of catastrophic illness. Any U. S. resident whose income is above the level of medical indigence would be entitled to reimbursement for expenses incurred as a result of catastrophic illness. Federal reimbursement would be 90 per cent of total eligible expenses.

Eligible expenses would be those health care costs above whichever of the following is the larger: (a) \$1,000 for those over 65 or \$5,000 in any other case, or (b) 25 per cent of the gross income of the individual or his family.

Funds for this two-part program would be managed by a Federal Health Care Trust Fund. Money for this Trust Fund would be raised through a 0.4 per cent tax on wages and self-employment income, and on other income in excess of \$2,000 up to the maximum income in use for purposes of the Social Security Tax.

Congressman Hall estimates that his Part A would cost the Federal Government about \$3.7 billion a year. The cost to the states for Part A would be about \$600 million Medicaid presently

costs the states about \$2.5 billion. There is no estimate as to the cost of Part B. The program would become effective on January 1, 1972.

CONGRESSMAN HOGAN — NATIONAL CATASTROPHIC ILLNESS PROTECTION ACT OF 1971 — H. R. 817

This bill would provide for a national program of catastrophic illness insurance. The program would be implemented through state plans administered by the state insurance authorities. The state plan would provide for the allocation of risk among two or more insurers acting through an all-industry placement facility.

Premium rates would be prescribed by the Secretary of HEW based on the risks involved in the coverage. A lower premium would be established to encourage the purchase of extended health insurance. Losses incurred by the insurer due to use of the lower premium would be compensated for by premium equalization payments made by the Secretary.

There would be a deductible under the extended health insurance policy with respect to medical costs in any year equal to 50 per cent of the amount by which the adjusted income of an individual or family exceeds \$1,000 but does not

one capsule for the rest of the night

NOLUDAR[®] 300

(methypylon)



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

exceed \$2000, plus 100 per cent of the amount by which the adjusted income exceeds \$2,000. This deductible would generally be paid through the family's basic health insurance.

The Secretary would be authorized to offer, to any insurer or pool of insurers, reinsurance against losses incurred from extended health insurance policies. This reinsurance would only extend to policies provided through approved state plans.

In cases where a state cannot carry out the catastrophic illness insurance program, the Secretary would be authorized to carry out the program in that state through the facilities of the Federal Government, utilizing insurers or HEW officers and employees as fiscal agents of the U. S. There are no cost estimates available on the plan.

ADMINISTRATION PROPOSALS

In his Health Message to the Congress on February 18, President Nixon outlined his proposals for National Health Insurance. No bills have been introduced to provide final details to these proposals.

The Administration program includes a National Health Insurance Standards Act which would require employers to provide basic health insurance coverage for their employees. The minimum benefits would include hospital and physician care, (limits not defined) full maternity care, well-baby care, laboratory expenses and certain other expenses. There would be certain deductibles and coinsurance.

The minimum program would also provide at least \$50,000 in coverage for each family against the costs of catastrophic illness. Under this program employees could elect to be enrolled in a Health Maintenance Organization rather than receive the basic coverage through private carriers.

The program would be paid for by the employer, 65 percent for the first two and one half years, 75 percent thereafter, and the employee, 35 percent and 25 percent, so there would be no cost to the Federal Government.

The program would go into effect on July 1, 1973.

A second Administration proposal would provide a Family Health Insurance Plan to replace Medicaid for poor families. The program would be financed and administered by the Federal Government. It would provide health insurance to all poor families with children headed by self-employed or unemployed persons whose income is below a certain level, \$5,000 for a family of four.

The program would pay all medical costs for

families with income below a certain level, \$3,000 for a family of four. As income increases, the family would begin to pay part of the costs through a graduated schedule of premiums, deductibles, and coinsurance.

In order to encourage states to use Medicaid funds made available by this bill to supplement the basic program, the Federal Government would bear the costs of administering a consolidated Federal-State benefit package. The program would become effective July 1, 1973 and would cost \$12.4 billion.

SENATOR PELL — THE MINIMUM HEALTH
BENEFITS AND SERVICES DISTRIBUTION
AND EDUCATION ACT OF 1971 — S. 703

Under this bill, business associations and other entities engaged in commerce would have to provide to their employees and their families a minimum level of health benefits. The minimum benefits would be: on a yearly basis, one complete diagnostic examination; those visits to a physician, or out-patient clinic, or any other ambulatory health facility, which are necessary for the treatment of an illness or injury or the prevention of illness or injury; up to 12 days of inpatient hospi-

(Continued on next page)

\$100,000

ESTATE \$233⁰⁰
FOR ONLY At age30!

This plan is one of the lowest net-cost life insurance plans in America. Rates at other ages are equally phenomenal.

A level term policy written in minimums of \$100,000 (and no maximums), this plan is designed for the man who needs a larger amount of life insurance at the lowest possible cost.

The plan is written for ages 20 through 65, is renewable to age 70 and may be converted to a permanent plan prior to age 65 without a physical examination.

SBL Security Benefit Life Insurance Company
700 Harrison, Topeka, Kansas 66603

**Financial Security Corporation
Cumberland Professional Building
2180 Mendon Road
Cumberland, Rhode Island 02864
726-2371 726-2370**

Please send additional information about your remarkable low-cost insurance plan.

Name _____

Address

City

State

Zip

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

tal care beyond the first two days of hospital care; up to 10 days of care in an extended care unit when necessary for recovery from a serious illness, accident, or surgery; services provided in hospital emergency rooms for serious injuries of illnesses requiring immediate attention; physician, hospital, and diagnostic services associated with child delivery and for pre-natal care; professional services of physicians furnished in their offices or elsewhere consisting of preventive, primary or surgical or special care.

Paramedical and other support services such as provided by pathology and radiology laboratories; the professional services of optometrists in the refractive measurement of the eye, and prescribing eyeglasses; the professional services of podiatrists and chiropractors and the provision of therapeutic devices, appliances, and equipment if these services or equipment are important to the maintenance of employability of an employee; drugs which are provided in conjunction with the other basic benefits of this program and which are approved by the Secretary and coverage of the costs associated with catastrophic illness within the limitations prescribed by the Secretary.

The requirement that minimum health benefits be provided by an employer would take effect two years after the enactment of this bill, except in special cases where the effective date would be five years after the date of enactment.

The bill would authorize for-profit community health and education corporations. These corporations would provide comprehensive health services to an identified population on a convenient and accessible basis in or near a specified service area. It would provide, through contractual or other arrangements, which embody prepaid group practice or its benefits, minimum health benefits to which persons would be entitled from a contractee. It would provide for the education and development of qualified physicians, nurses, paramedical, and other health personnel necessary to provide comprehensive health benefits and it would provide for the construction, rehabilitation, maintenance, and operation of facilities required to provide comprehensive health services, minimum health benefits, and the education and development of health personnel.

A corporation would be established in an area determined by the Secretary to be in need of its services and the bill outlines procedures for establishing a corporation.

A corporation would have to provide compre-

hensive services in its area, maintain community hospitals of outstanding quality, conduct educational programs, including residency, intern, and clinical instruction for medical doctoral candidates, clinical experience for allied health students and continuing education programs for health manpower in the area. Physicians would have to meet national standards established by the Secretary, and would have to meet continuing education requirements. In order to perform surgery or specialized services the physician would have to hold a certificate from the appropriate national specialty board or possess the qualifications requisite to certification. The bill sets out requirements for hospitals, skilled nursing homes, and home health agencies eligible as qualified providers for a corporation. Individuals receiving their medical education through an arrangement with the corporation would have to remain an employee of the corporation for a period not less than 3 years and not more than 10 years.

Federal funds would be available for the purpose of assisting the initial organization and operation of a corporation, financing health care services to low income individuals on a per capita basis by the corporation, and other education, facility and related expenses.

**SENATOR JAVITS — NATIONAL HEALTH
INSURANCE AND HEALTH SERVICES
IMPROVEMENT ACT OF 1971 — S. 836**

This bill would provide a system of national health insurance to be implemented by expanding the present Medicare program to include all individuals. The bill is designed to be fully operative by July 1, 1974. It would provide coverage for the disabled, the unemployed, and the poor before that date.

The bill would also add the coverage of maintenance drugs to those benefits provided under Medicare. A fee of \$1 per prescription would be imposed. The provider of a maintenance drug would be reimbursed for the reasonable drug charge, which would be the acquisition allowance plus a dispensing allowance.

The bill would also cover physical examinations for all and dental care for children under 8 years of age. These additions would become effective on July 1, 1975.

The bill would authorize the Secretary of HEW to prescribe: standards of continuing education, national minimum standards of licensure, or standards of qualification for the performance of major surgery or other designated specialty services.

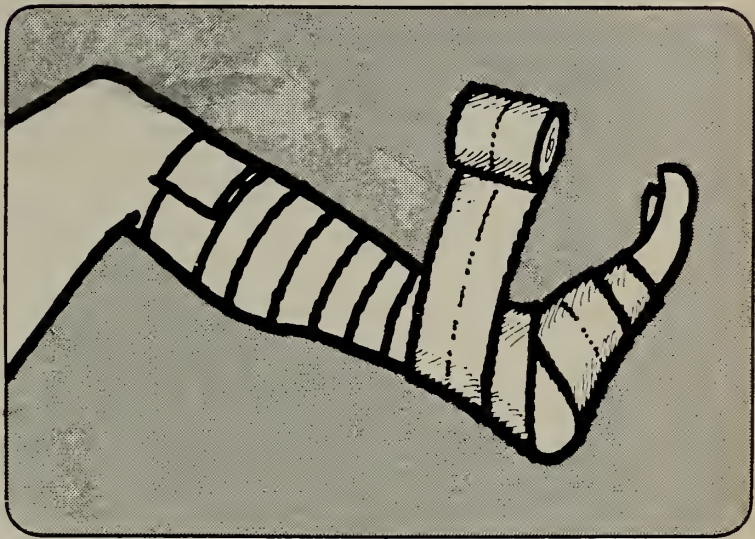
The program would be administered by the Federal Government. However, the Secretary of HEW could enter into agreements with any state to allow state administration.

(Continued on next page)

PRIMER[®]

PLUS

Flexoplast[®]



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

... **EDWARD TAYLOR Ltd.** ...

A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name M.D.

Address

City

State Zip

Hopkins

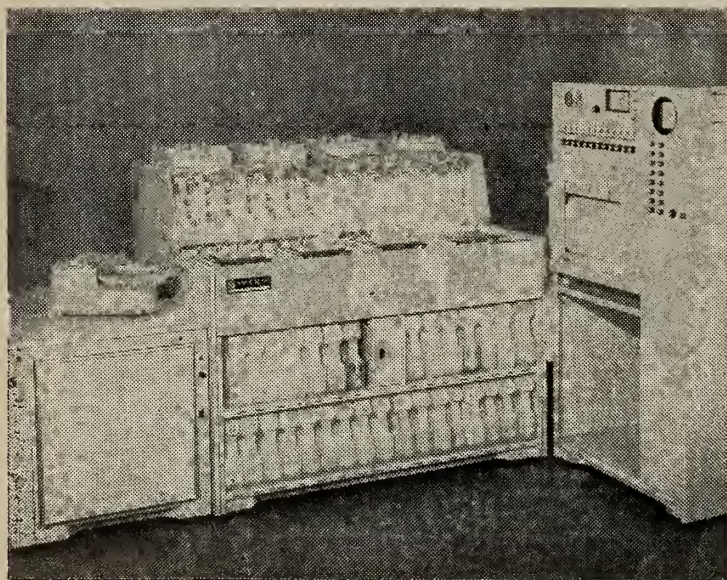
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLUCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

**ALL 20 PROCEDURES
\$15.00**



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

The bill would encourage improvement in the organization of health care by requiring carriers who participate in the program to (a) make a continuing study of the organization and methods of delivery of health services in the area, (b) review patterns of utilization and the effectiveness of procedures to control costs, and (c) take appropriate action to encourage the rational organization of health care services and to provide greater continuity and comprehensiveness of care,

The Secretary would be authorized to contract with comprehensive health service systems for the provision of health care. Payment to the systems would be for the reasonable cost of the services or on a predetermined capitation basis. There would be a bonus provided to the system if its costs are below the average costs for the services when provided to a comparable population group.

The Secretary would be authorized to contract with any carrier to provide health benefits equivalent to those provided under the program to individuals who elect to be covered by the carrier.

The Secretary could also enter into agreements with employers for the provision of health care benefits to their employees. Such a plan would have to cover the employee and his dependents, would have to have at least 75 per cent paid by the employer, and would have to provide benefits superior to those provided under Medicare.

The bill would authorize a study of procedures for payment to providers and would authorize the Secretary of HEW to appropriately modify the methods for determining the amount of payment to be made to providers. These modifications would be effective July 1, 1973.

A special account would be created in the Federal Health Insurance Trust Fund which would provide for the payment of benefits for those under 65.

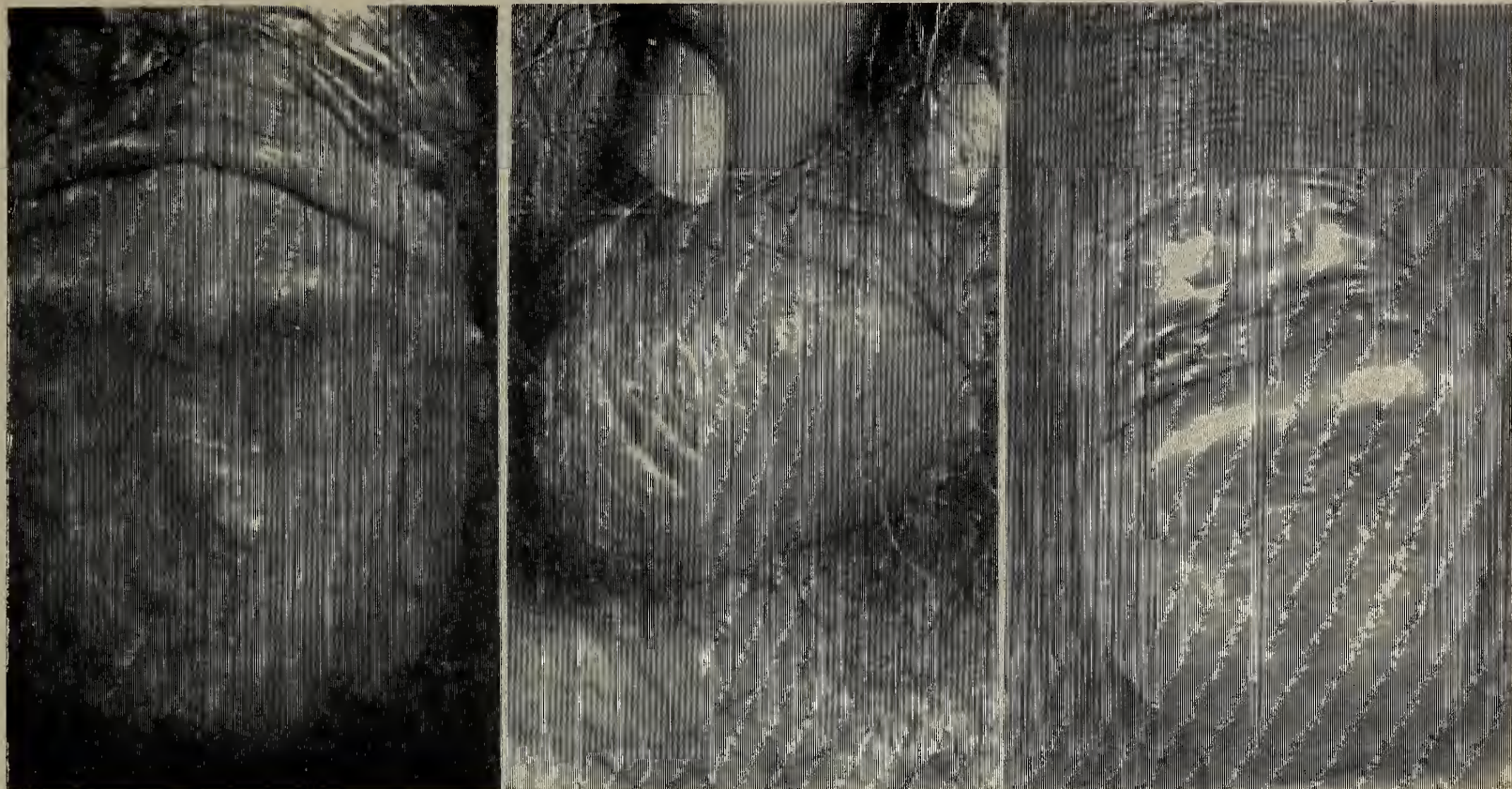
Funds to the special account would be attained through a tax on payroll with the wage base being increased to \$15,000. The tax rate for employers and employees would increase from .7 per cent in 1972 to 3.3 per cent in 1976. The Federal Government would contribute an amount equal to one-half of the total amount contributed by employers and employees.

The bill would authorize the Secretary of HEW to make loans and grants and to provide technical assistance to enable comprehensive health service systems to plan and develop comprehensive health care programs.

(Concluded on Page 232)

DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



(Left) Smooth, non-scaly rings, circinated, painless, non itching, of few months duration, on the glans penis.

(Center) Scaly, pink papules, no pain or itching. Duration: years.

(Right) A smooth, reddish, **PAINLESS**, ulcerated area. Palpation of the area between the fingers gives the feeling of a card board.

(Answer on Page 234)



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Ec-
on-
omy!

Dicarbosil®
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Regional Conference of Northeastern State Medical Associations

Relationships With Voluntary Health Agencies

Sunday, May 23, 1971

at the
Statler Hilton Hotel,
Boston, Massachusetts

Theme: Voluntary Health Agencies and American Medicine

Registration fee of \$5 which may be paid on arrival includes a luncheon ticket.

Sponsored by the AMA Council on
Voluntary Health Agencies

Peripatetics

By ROBERT V. LEWIS, M.D.

RICHARD P. SEXTON, Immediate Past President of the Rhode Island Medical Society, attended the International Congress of Plastic and Reconstructive Surgery in Melbourne, Australia February 22-26th as a delegate of the American Society of Plastic and Reconstructive Surgery.

* * *

MARSHALL N. FULTON, former chief of medicine at Rhode Island Hospital has been presented with the annual Alfred Stengel Memorial Award of the American College of Physicians. The college has also named Fulton as one of the 13 physicians awarded masterships in the college. The Stengel award is presented annually to college members who have given outstanding service to the group.

* * *

RENE MENGUY, Professor of Surgery at the University of Rochester Medical School and Surgeon-in-Chief at the Genesee Hospital, Rochester, New York, has accepted an appointment as the Second J. Murray Beardsley Surgeon-in-Chief Pro Tempore, Department of Surgery, Rhode Island Hospital, May 6, 7, 8, 1971.

* * *

FRANCESCO CANNISTRA of North Smithfield will be installed as a Fellow of The American College of Obstetricians and Gynecologists at its Annual Meeting, May 3-6, in San Francisco.

* * *

LAURENCE SENSEMAN has completed his visiting professorship at the Christian Medical College, at Vellore, South India, and has returned to the United States. He will take up permanent residence in Glendale, California, as Psychiatrist to the Glendale Adventist Hospital. Many are the achievements which he leaves behind in Rhode Island: the development of the Fuller Sanitarium from a private estate to one of our major psychiatric facilities, his outstanding work and devotion to the medical aspects of alcoholism, his years of service to the RHODE ISLAND MEDICAL JOURNAL, and his active participation in innumerable civic projects.



RHODE ISLAND MEDICAL JOURNAL

Book Reviews

MANUAL OF CLINICAL LABORATORY PROCEDURES. Co-Editors Willard R. Faulkner, Ph.D., and John W. King, M.D., Ph.D. Cleveland, The Chemical Rubber Co., 1970.

This manual published by The Chemical Rubber Company is a compilation of laboratory procedures in chemistry, endocrinology, blood bank, hematology, histology, bacteriology, serology, and a few miscellaneous tests. Each laboratory procedure is prefaced by a statement of the principle followed by the nature of the specimen, procedure, notes or interpretation and a list of reagents. Normal values are listed when applicable. Since normal values may differ among laboratories because of variation in population groups, reagents, instruments, and atmospheric conditions, it would be more appropriate to recommend their determination by individual laboratories. Because of the increasing use of automatic equipment, many of the hand tests, especially chemical, are less frequently useful. Nevertheless, standby set-ups are necessary, and the trainee in laboratory technology should be made familiar with these procedures.

Essentially, this is a handbook of laboratory procedures. Interpretations are scanty.

I find this manual of limited value because there are plentiful numbers of books on clinical pathology which not only describe procedures, but also furnish extensive useful discussion and interpretation.

HERBERT FANGER, M.D.

* * *

BIOPATHOLOGY OF PATTERN ALOPECIA.

Edited by A. Baccaredda-Boy, G. Moretti, and J. R. Frey. Basel. S. Karger, 1968.

The volume contains the proceedings of the International Symposium held in Rapallo, Italy, July 27-28, 1967 on the biopathology of common baldness. Modern investigations on this old problem include phylogenesis, ontogenesis, anatomy, histology, biochemistry, and endocrinology.

A center for such investigations was instituted by Prof. Baccaredda-Boy in Genoa, Italy. His assistant, Prof. Moretti, a former researcher in the department of Dermatology at Boston University, with others, has a chapter on biochemical aspects of hair growth in the rat, and others on the histochemistry of dermis, of blood vessels in male pat-

tern alopecia, and on the biochemical aspects of same alopecia.

Serri of Pavia, Italy, also formerly of Boston University, discusses hair follicles in fetal life; Ludwig of Hamburg, Germany, the sexual hormones in common baldness; and Ellis of Providence, the electron microscope of sebaceous glands.

This is a most valuable volume for the researcher in dermatology.

F. RONCHESE, M.D.

(Continued on next page)

* * *

CIRCE by Giovanni Battista Gelli. Translated by Thomas Brown. Edited by Robert M. Adams. Illustrations by Peter Kahn. Ithaca, Cornell University Press, 1963. \$4.00.

From the title page: The *CIRCE* of Signior Giovanni Battista Gelli of the Academy of Florence, consisting of Ten Dialogues between Ulysses and several men transformed into beasts, satirically

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



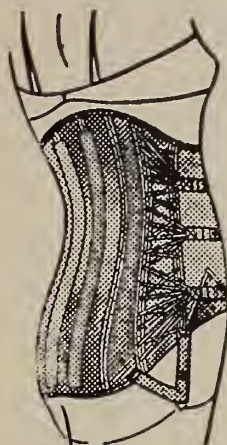
*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

RELIEVE



**BACK
PROBLEMS**

Freeman

**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS**

HOME TRACTION

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

representing the various passions of mankind and the many infelicities of human life. Done out of Italian by Mr. Thomas Brown (of facetious memory) and now newly corrected by comparison with the original, re-Englished in part, and provided with an introduction by Mr. Robert Adams (of Cornell University). Dedicated to nick, "serioso" ma non troppo.

Gelli, a Florentine shoemaker and humanist, wrote *Circe* in 1549. It was popular enough to go through five Italian editions and to be translated into Latin and into most modern languages.

Circe, enchantress and daughter of the sun, grants Ulysses' request that the men she has changed into beasts be allowed to return back to men on the condition that they consent to do so on their own free will.

Ulysses confers with them unsuccessfully. All give the reasons why they prefer to remain beasts.

The snake, a former physician, is happy with his vegetable diet. He will not for any consideration go back to drinking and overeating of the past, done only for pleasure. Think of the superfluous humors, the offensive odors, the number of diseases.. Don't you know that for the eyes alone there are fifty different diseases? The remedies usually do more harm than good because of our not knowing how to use them properly. Many cities of Greece have banished physicians from their territories.

To the insistent demand of Ulysses that the snake return to his human status the snake replies that doctors cure everybody in the lecture hall, but nobody in the sickroom. "My patients were attracted to me by my bedside manners only. Did you notice physicians give a thousand different remedies for the same disease? Have you not heard that it is better to meet a lucky physician than a learned one?"

"Do not insist, Ulysses. In my present condition I live contentedly without a single thought."

Certainly many humans, including physicians, envy the thoughtless squirrel happily munching her peanut.

Most interesting are the illustrations by Peter Kahn depicting Gelli's likeness, the oyster, the mole, the snake, the hare, the goat, the deer, the lion, the horse, the dog, the bullock, and the elephant debating with Ulysses.

F. RONCHESE, M.D.



RHODE ISLAND MEDICAL JOURNAL

The Washington Scene

A Summary Report Prepared By The Washington Office Of The American Medical Association



The federal government now has the authority to expand the U.S. Public Health Service to provide direct medical and other health care services in ghettos and rural areas where there are shortages of physicians and other health personnel.

Before such a program can be started, the state and local medical society must certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous voice vote. President Nixon signed it into law on Dec. 31 although the secretary of Health, Education and Welfare, and the PHS surgeon general had asked Congress to defer action until the President had presented his overall health program early this year.

The legislation authorized \$10 million for the current fiscal year ending next June 30, \$20 million for fiscal 1972 and \$30 million for fiscal 1973. The money must be appropriated before it is available for the program.

In its report approving the legislation, the House commerce committee expressed a hope that it would help revitalize the PHS which the Nixon Administration reportedly has been planning to further downgrade, or even eliminate, in a reorganization of the health activities of HEW.

"That the Public Health Service has been allowed to languish, and that the great functions it has performed have largely been stripped from it, is the fault of this and previous administrations, and a tragedy from the standpoint of the nation's health needs," the committee report said.

Physicians enlisting in the program will become PHS commissioned officers and, as such, be exempt from the military draft. Fees paid for their services will be set by the HEW secretary and go into the U.S. treasury.

The HEW secretary has the responsibility of determining, after consultation with local officials and health groups, what areas need such a program. He then can assign PHS personnel there

The federal government now has the authority to expand the U.S. Public Health Service to provide direct medical and other health care services in ghettos and rural areas where there are shortages of physicians and other health personnel.

Before such a program can be started, the state and local medical society must certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous on Dec. 31 although the secretary of Health, Education and Welfare, and the PHS surgeon general had asked Congress to defer action until the President had presented his overall health program early this year.

The legislation authorized \$10 million for the current fiscal year ending next June 30, \$20 million for fiscal 1972 and \$30 million for fiscal 1973. The money must be appropriated before it is available for the program.

In its report approving the legislation, the House after receiving a request from a state or local health agency or other public or non-profit private health organization and a certification of need from the state and local medical society.

The new law — the "Emergency Health Personnel Act of 1970" — also provides for the establishment of a 15-member National Advisory Council on Health Manpower Shortages. It will include three members from the health professions, three members from state health or health planning agencies and four from the general public representing consumers of health care.

* * *

President Nixon was pronounced in "excellent health" with a "young man's blood pressure" after his annual physical checkup.

Air Force Brig. Gen. Walter Tkach, M.D., the President's physician, said that all the tests given the nation's chief executive at the Bethesda (Md.)

(Continued on Page 228)



**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone[®] Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206



100204

American Health Care System Revisited

Chairman Of The AMA Board Of Trustees Discusses Health Care Problems And Offers Positive Approaches

By Max H. Parrott, M.D.

The American Medical Association does not say that the American medical and health system is perfect. It is not.

Nor does it say that the American medical system should be scrapped. It has problems, and the AMA advocates some positive approaches to solve these urgent problems and to suggest how improvements can be made.

The American medical-health system needs something more than a poultice . . . but something far less than burial.

The American Medical Association strongly favors a system of private, medical insurance for everyone — for the poor at no cost, for others at a cost related to income.

The AMA strongly favors insurance for everyone against the financially catastrophic cost of a protracted illness.

The AMA recommends modifications in medical education, in manpower programs, and in other areas to make medical care more accessible to all, to correct maldistribution of health care, and to hold down the costs.

MAX H. PARROTT, M.D., of Portland, Oregon, is the Chairman of the Board of Trustees of the American Medical Association.

Statement presented March 15, 1971 before the Subcommittee on Health of the Labor and Public Welfare Committee of the United States Senate.

The AMA believes that it can better bring about these needed improvements without gambling on a whole new medical-health system whose effects and effectiveness are, in the main, unpredictable.

It might be useful to begin by putting our whole dialogue on national health care in better perspective. Most of the testimony presented so far has been highly critical of medicine. Is it all that bad? I think not.

The American doctor is not a machine or a robot. He is a human being, a compassionate human being. What he does is take care of people with all the very considerable skill at his command. His whole long training, his whole motivation is focused on the preservation of human life.

Collectively, he sees about 2 million people a day. He is the man — or she is the woman — who serves the largest, most highly-utilized health care system in the world. The American doctor is the one who will be asked to provide health care for the people, whether the nation stays with the present system, modifies it, as the AMA suggests doing, or scraps it to substitute something unproven.

The American physician can sometimes perform miracles with his patient. He can usually help. And he sometimes is helpless. On the research side, he has won more than his share of Nobel prizes. He has played a large role in developing most of the antibiotics now in daily use, which continue to

(Continued on next page)

have a dramatic impact on health statistics all over the world. Through accreditation programs and his insistence on high standards, he has made American medical education the toughest and most sophisticated in the world. Time was when students went to Vienna or Edinburgh for the best in medical education. Today they come to this country. In terms of scientific knowledge and modern technology, in the very important terms of a practitioner's knowledge and skill, he has a capability that is rarely matched. He has virtually eliminated an impressive list of diseases. He has increased his ranks by 28 per cent in the last ten years . . . but he still, most often, works a 50- or 60-hour week. And, though he has personal, daily access to the highest quality health care in the world, he lives no longer than anyone else.

The American physician is largely responsible for the start of his art. He is proud of it. And he wants it to be even better, to improve it wherever possible, to provide better and better care for everyone.

But today, the American doctor is quite concerned. He is concerned mainly that in the whole consideration of national health care systems, the baby may be thrown out with the bath water. He is afraid of losing the past accomplishments. He is afraid that the quality of medical care may suffer. And he is afraid that some solutions proposed to solve the present health problems will only precipitate a truly massive health care crisis sometime in the near or distant future.

MAJOR AREAS OF CONCERN

He is concerned, first, that medicine may be expected to cure health deficiencies that at best can only respond partially to medical programs. Many health problems — which doctors want to solve just as much as anyone — are more factors of society and economy than the absence of medical treatment.

Because of the nature of American society and the form of the economy, factors are at work here on mortality rates that do not apply to the same extent abroad. For example, one of the most damaging blows to health statistics comes from the very affluence of society. We do not hear much discussion about this. It's something the country likes to sweep under the mental carpet. But the truth is the fat standard of living does create health problems. We ride in cars when we should be on a bicycle or on foot. We overeat. We overdrink. We smoke cigarettes.

And this affluent life style relates directly to some of the most depressing medical statistics. Up to the time when a person is forty-five or so, the most common cause of death is an accident . . . in a car, on the job or at home. After a person survives his mid-forties, heart disease takes over as the number one killer, and heart disease — many forms of it, anyway — links up very closely with the affluent standard of living most "enjoy."

Doctors, of course, are involved with the 55,000 people who are killed on the highways every year. Doctors help salvage the lives of the 2 million or so people who survive automobile accidents. They are equally involved with the victims of the various heart diseases, many aggravated by smoking, overeating, overdrinking and under-exercising.

Is the best and only answer to these two major health problems a purely medical solution? Is plunking down a fully equipped hospital every fifth mile of our \$80 billion interstate highway system the most efficient way to prolong life among people under 45? To be sure, increased medical services would help. But is that the way to tackle the problem? Is this a problem that will yield to a medical solution?

POVERTY AND HEALTH

Poverty also exists in this country. And poverty, too, affects our health statistics. Though it may only account for 2 per cent of our mortality rate — compared to 38 per cent for heart disease among people after middle age — infant mortality has somehow become one of the popular indices of health care. Infant mortality, especially in our ghetto areas, urban and rural, white and non-white, is deeply disturbing.

As a practicing obstetrician I am in intimate contact with the tragedy of the newborn child whose spirit flickers briefly and then dies out. But on the basis of personal experience, the best response to this tragedy may be only partly medical; it is not purely medical.

Infant mortality ties in with nutrition. It relates to the age of the mother. Ill-fed, ill-housed teenage girls are simply not strong enough, quite often, to support a healthy fetus. The real problem is the ghetto itself and if a medical program alone is tried, without attacking all the other problems of the ghetto, there may be a sharp disappointment.

If a broad program could be created to bring dignity into the lives of people in slums, if a world could be created into which every mother

wanted to bring a baby, that would do more to improve infant mortality rates than a hundred Mayo Clinics.

The American doctor wants to be sure that the health dollars are spent on programs that will produce results. By no means will all major health problems vanish before an onslaught that is only medical. That approach is simplistic.

The nation did not attack malaria by doubling the number of hospital beds or tripling the number of doctors. It conquered malaria by draining the swamps.

The American doctor, trained as he is in the scientific method, is also very skeptical about applying anything broadly till he is pretty sure the treatment will work. He is yet to be convinced, he has yet to see the evidence, that any one system of delivering national health care will necessarily improve on what we have. He believes in innovation. He believes in experimentation. He demands objective evidence.

He wants to get the test results from the many significant studies, some near completion, others just underway, to identify that form of medical practice which may be most efficient. But, as yet, few definite answers exist. The AMA, for example, is trying, through a study with the University of Southern California, to find out what economics of scale there may or may not be in group practice. At this point there is no solid proof.

WANTS BETTER HEALTH CARE

The American doctor wants better health care for this country. But instinctively, because of his training, he fears to move into anything untested. He is sincerely concerned over the prospect of any sudden, single, massive, unevaluated experiment which would cast all 200 million Americans in the role of the guinea pig. He does not want to try an experiment on a nationwide scale. He prefers to find out the mistakes on a small scale before the entire population is involved.

The American doctor also shares the reservations many people have about government's ability as a manager. He is very interested that our postal system, in the interests of efficiency and economy, is now restructured to operate more under the disciplines common to a private corporation. He is aware that the welfare system, at great cost over 30 or 35 years, has not accomplished what it set out to do. He is dismayed when he looks at all the over-utilization and under-utilization in Veterans Administration medicine and the whimsical distribution of some of its facilities. He raises

many questions about the occasional sorry estate of municipal medicine. He asks, too, how well the country serves its mentally ill in various State programs.

What really concerns the American doctor when he considers government medicine is the matter of priority. He worries whether the American people will get the type of health care if our annual health budget is to compete in the national political arena against more glamorous and immediate demands for things like new highways, SST programs, interplanetary exploration, and defense appropriations.

The American doctor is genuinely concerned that in such a competition, health care for all American people just might come out second best.

COST

Physicians' fees have gone up in the last ten years and they have risen twice as fast as the cost of living.

However, this does not mean that physicians' income is out of line. The rise in fees has gone largely to cover rising expenses in an inflationary period. And it has gone for expanded services in a period of growing demand.

Physicians' net income — what he gets after the expenses of conducting his practice — has not risen out of line with the overall increase in the general wage level. In fact, it conforms very closely to the long-range upward trend in wages.

This is not to deny that health costs have gone up. They have, as we all know, especially hospital costs which absorb 37 per cent of the health care dollar versus the physician's 19.6 per cent.

Three factors have had a major impact on health and medical care costs.

First of all, there is the impact of inflation generally. Physicians, as with everyone else, have to pay more for the things they use, from stethoscopes and tongue depressors to the wages for their nurses and receptionists, for office rent, and even for those dog-eared, out-of-date magazines on the waiting room table. Doctors have also been hit very hard for the premiums they now have to pay for professional liability insurance. In many cases, the premiums have soared to four, five, seven thousand dollars a year. There is a neuro-surgeon in California whose professional liability insurance costs him \$23,000 a year. In some states insurance companies refuse entirely to insure a doctor against a malpractice suit.

A more significant impact results from the consensus that there must be no economic barriers.

(Continued on next page)

Health care is a right, and it is a right for a growing population. The American Medical Association agrees with this consensus. At the same time, the U. S. has broadened its health programs, notably Medicare and Medicaid. Insurance companies too have expanded the coverage which they give their customers.

These shifts have led to an inevitable increase in demand, on the demand for medical services. They cannot help but have an inflationary, demand-pull effect in a free economy. Can anyone conceive what the effect might be on air terminals and our airlines if, in a brief period, a decision was made that domestic air travel was a right?

The comparison is apt because in both medicine and air travel it takes time to create the supply needed to meet new demand. In the meantime, a growing demand works against a relatively constant supply. The result, in conformance to economic law, is inflationary. Incidentally, all the health proposals before Congress, including the AMA's would exert inflationary pressures in varying degrees.

Third, there is the impact on costs of new technology. A few years ago there was no extensive cobalt treatment for cancer. No open heart surgery. Few attempts at organ transplants. No dialysis treatment for kidney disease. And, of course, no need to pay for them. But today there is.

RESPONSES TO MAJOR CONCERNS

Concerning the second cost factor, the AMA agrees there should be no economic barriers between someone who is sick and a doctor. This nationally increases demand and inflationary pressures. There are no immediate suggestions.

Would fixing medical fees work? A physician's fee includes his wage. And no one will accept a wage freeze without a price freeze. On the issue — if it ever came to that — of freezing wages without freezing prices, we (AMA) would line up right behind Leonard Woodcock and the United Auto Workers.

Finally, what about the impact on costs brought on by new technology? The legislator's responsibility to protect the taxpayer and consumer from rising costs is understandable and acceptable but the AMA must fight for quality care for the patient. The Congress must respond to one consumer desire and organized medicine must satisfy another.

But does anyone suggest that advances in medical treatment should be held off because the new technology costs more? Does anyone really want

to hold back a new treatment for cancer, say, in order to hold back medical costs?

Difficult as the matter of controlling cost may be, there are some constructive answers. Insurance mechanisms can — and are — being adjusted to shift care out of the expensive hospital area into ambulatory services. Medical education can stress the need for more family physicians to take care of most illnesses. There is a need for more primary physicians. More emphasis in medical training is being put on ambulatory rather than hospital care. Many review procedures can be more sharply focused on achieving equal results through less expensive methods. Domiciliary care and nursing homes can be considered in a new context.

WARNING

The frustration over rising costs, serious as it is, should not lead to an automatic recommendation that our present system should be scrapped in favor of adopting a new one.

The American doctor has two questions on that point. One, where is the evidence that a revolutionary change will make care less expensive? There is no such evidence. The facts may show that some proposals will drive costs even higher than they are now.

The second point is neither the American doctor nor the American patient wants to sacrifice quality in the name of economy. For that would bring us to the awful question: "What is a life worth?" The whole national tradition places a high value on human life, and this tradition relates to the price the nation pays and the price for continued payment for medical services, no matter how they may be organized.

The subjects of quality, health care delivery, and manpower are all so closely related that it is difficult to discuss one without discussing the others. The quality of medicine in this country is unexcelled; the problem is distribution. It is sometimes not available when or where it should be. No country surpasses the United States in the quality of medical education, but it is difficult to provide enough physicians and a disturbing number of medical schools are very nearly broke.

Quite simply, these problems are not intrinsic to the quality of American medicine. The problems, for the most part, lie outside medicine. The problem of access to care for inner city and rural populations, for example, is basically one of social debility, of financing, of transportation. It is not so much a question of making a ghetto a healthy

place to live. The goal should be to convert the ghetto into a decent, all-around community so that it is no longer a ghetto. The problem of producing sufficient numbers of physicians and allied health workers is primarily one of federal funding priorities. However, all of these conditions have a serious effect upon medicine and its practice, and the American Medical Association is concerned about them and trying to find solutions.

PROBLEM OF QUALITY

The matter of quality is distressingly difficult because no one is really agreed upon the measurements. Many observers take as a valid yardstick the figures of the Demographic Annual of the United Nations. If these figures are accepted — and the AMA does not for purposes of valid comparison — medicine in the United States can be made to look inadequate. Because each country compiles its statistics differently, because, in effect, countries use different accounting methods, the figures are not valid for comparative purposes.

It is not known, for example, precisely where the U. S. would rank in infant mortality. There is doubt if it is 18th, but the nation would not be first. Organized medicine would like to see the infant mortality rate reduced to zero. But that is not the point.

The point is: Do infant mortality rate comparisons indicate whether health care in a country is good or bad?

Possibly they might if — and this is a very big “if” — all the variables other than medical were excluded. If, for instance, this country accepted the principle of abortion on demand — which is something I would disagree with — there would be no such thing as an unwanted baby. And infant mortality rate would drop. Sweden, Japan and other countries provide, at virtually no cost, abortion on demand. Is it statistically sound, then, to compare U.S. infant mortality rates with theirs? Reason would dictate a negative response.

How silly statistics can be! South Dakota has the lowest infant mortality rate of any state. South Dakota also has a ratio of doctors to population 41 per cent below the national average. Does that mean that improvement can be made in infant mortality by reducing the number of doctors?

There are those who can cite figures to prove that birth rates are highest in areas most heavily populated by storks, generally rural areas. That there is a significant human variable in the birth rate other than the incidence of storks is readily

understandable. There are variables other than medical care in comparative infant mortality rates.

Is infant mortality — or longevity — or any other medical statistic — a true measurement of a nation's health? It can be argued that the American health system is best because our bronchitis mortality rate is the lowest in the world.

Most people would not accept that argument. Why do people think the infant mortality rate is any more a valid indicator of health than the bronchitis rate? Of very commendable figures on TB, pneumonia and duodenal ulcers? Very few statistical comparisons deserve any scientific stature.

PHYSICIAN COMPETENCE

It is equally difficult to measure the quality of physician competence. There are some indications as to how deeply he cares. There was a time, not too long ago, when American medical schools — a lot of them, anyway — were a joke. They were diploma mills. The American doctor changed that. Today the American medical education system produces a physician at least equal and more probably superior to the graduate of any other educational system.

This results almost 100 per cent from the insistence of the American doctor himself.

Our profession believes equally in education after a physician has entered practice. The number of continuing medical education courses offered has more than doubled in the last ten years. In the same period the number of physicians participating, measured in registrations, has increased tenfold. Some state medical associations now make participation in continuing education programs a condition of membership.

Medical quackery — which even today is not as quaint or rare as one might think — represents another cause the American doctor has fought, again largely alone. Very few state governments have offered the physician much help in exposing the shabby fraud of chiropractic. Provision for chiropractic care still appears in some national legislative proposals; hence on the very important matter of quality, the American doctor takes a far tougher position than anyone else.

The matter of quality control again presents difficulties. A great deal of discretion is involved in the practice of medicine. It is difficult, for example, to define over — or under — utilization. Usually, if all is well, I send a mother and her new baby home three days after birth. Seven days

(Continued on next page)

is better, but that's pretty tough financially on younger families. But I wouldn't follow the three-day procedure for an equally healthy new mother if she had to return to the Warm Springs Indian reservation back over the mountains near Madras, Oregon. There her society and culture makes no allowance for home rest and recuperation. I might like to keep her in the hospital seven days.

Now, is that over-utilization? Or is it common sense? Neither of those, actually, is the important question. The important question is: Who makes that decision? That is a doctor's decision, subject, of course, to review by his peers.

A patient with a serious illness is rightfully concerned about the quality of care which he receives. He can sense usually whether he is getting better or worse. He knows whether he has been treated considerately or rudely. He has feelings about whether his doctor saw him frequently enough or tended to ignore him. He has personal reactions, on this basis, to the type of care he thinks that he is getting.

Important as these considerations are, they do not speak to the central question. Did he receive medically good care?

In one sense, it is unfortunate that only another doctor or group of doctors can really make this judgment. We doctors are accused of grading our own examination papers. But what other choice makes sense? Who is qualified to make a medical judgment?

Precisely for this reason, the medical profession supports peer review — practicing physicians being evaluated by practicing physicians in the same locality, in consultation with members of the same specialty, to assure that the highest quality and efficiency are maintained. Peer review is a long-standing obligation that the profession has placed upon itself, although not always as formally structured as it is today. Medical societies have formal peer review committees now in operation in all but two states.

DELIVERY AND MANPOWER

The health care system in this country is a pluralistic one — a composite of private and public programs which grew to meet needs as they arose. We have a health care system, however free it may be of centralized controls and stratified regulations.

The system which we have offers opportunities for innovation and competition, incentives for organizational change and improvement of quality. Medical services, under such a pluralistic system,

are better able to grow and change with the times than they might be under a monolithic system, locked into bureaucratic management, subject to non-medical ukase, or political whim.

No one mode of practice appeals to all physicians or to all patients. We must offer the physician, after those arduous yeears of training and sacrifice, the freedom to choose the way he wants to practice medicine. And we must offer our diverse patients the freedom to choose the type of program best suited to their diverse wants and needs. Economic barriers must be removed to preserve human dignity because freedom of choice for doctors and patients alike, must be continued to be defended.

The maldistribution of health care services can be ameliorated through a shift in emphasis in many programs. Scholarships tied to service contracts, income guarantees, and preceptorships will help with this problem. But more attention should be given to transportation, to the use of more physicians on a part-time basis, to facilities for remote bio-monitoring of patients, and to more innovative use of allied health personnel.

Maldistribution is also a health manpower problem. There can be no doubt that there is a shortage of physicians today, although it is hard to say how large the shortage is. Health manpower has been expanding, for many years. And the AMA has been working its hardest to expand it. The increase in health service personnel during the past decade is expected to be about 80 per cent. The number of physicians increased 28 per cent between 1960 and 1970 while the population increased only 12 per cent. And it's still not enough to meet the demand.

MEDICAL SCHOOL EXPANSION

In 1968, the AMA and the Association of American Medical Colleges intensified their effort to encourage medical schools to provide opportunities to all qualified students, and many schools have made substantial efforts in this direction. An overall expansion of 25 per cent in existing medical schools enrollments seems likely within the next few years.

The AMA has long supported and aided in the development of new medical schools. In 1967 there were 89 schools with less than 9,000 freshmen. Today there are 103 schools and 11 others are in the process of development. In 1971, the number of freshmen is expected to be nearly 12,000. By 1976 we estimate that there will be 15,000 students

(Concluded on Page 234)

Legislative Proposals For National Health Insurance

Speaker Of The House Of Delegates Points Out AMA's Concerns On National Health Plans

By Russell B. Roth, M.D.

It can be no surprise to any one who has ever looked carefully at the County Medical Societies which elect the delegates to the State Medical Societies, and the State Societies which elect the bulk of the delegates to the American Medical Association, that there is grass roots grounding that the AMA looks with distrust on programs which would attempt to restructure the way in which medicine is practiced in this country.

The 244 physicians who constitute the House of Delegates are singularly of one mind in feeling that physicians can ill afford to legislate themselves into programs that won't work, that are economically unsound, or that would basically disrupt the motivations which make physicians dedicate themselves to serving their patients to the very best of their professional abilities.

This widely held mistrust of governmental controls in medical matters cannot, or should not be dismissed lightly. The men and women — the physicians — of this country who live daily with the satisfactions of their accomplishments for their patients — and the frustrations of their failures, and the concern over the things that can't be done, or aren't done, which might be done, have a col-

RUSSELL B. ROTH, M.D., is a practicing urologist in Erie, Pa. and is Speaker of the House of Delegates of the American Medical Association.

Statement presented March 15, 1971 before the Subcommittee on Health of the Labor and Public Welfare Committee of the United States Senate.

lective wisdom in respect to these problems which should not be ignored.

AMERICAN MEDICINE

As an example — the often repeated allegation that American medicine today does not concentrate on keeping people well. There are endless references to the legendary — and really mythical Chinese physician — who was presumably paid to keep his people well, with the equal presumption that when he had to treat his failures he did so free of charge. This sounds delightful — in the abstract — but it has little practical meaning. Preventive medicine, of course, is a specialty of its own. The great gains in life expectancy the world over have been achieved by purifying water, draining swamps, controlling rats and lice, pasteurizing milk, and all the myriad other components of eliminating contagion, plus the development of immunizing procedures to protect against what can't be eliminated. The preventive opportunities which remain through accident prevention, public education in respect to proper nutrition, physical fitness programs, smoking, drug abuse and the like are legion. But only a minute amount of this type of medical progress can be effectuated in the practice of the individual physician. There are well over 200,000 practicing physicians in this country who

(Continued on next page)

A description of Medcredit, which was contained in the full text of these remarks, has been omitted. For a synopsis of the Medcredit plan, see page 182.

would cheerfully invite the theorist into their offices to suggest how to translate this preventive concept into practice. My own group of eleven physicians takes care of the urological problems represented by some 20,000 out-patients and 2,000 in-hospital patients each year. The group has been wholly unable to come to grips with what it might be doing differently in this context. Certainly the physicians can't brush aside the ones who have the problems while they try to keep the rest from growing kidney stones, having their prostates enlarge, or getting bladder infections. The orthopedists can scarcely ignore the fractures and concentrate on persuading grandpa to negotiate icy sidewalks carefully, or junior to drive with restraint. Actually physicians in private, fee-for-service, solo practice, and those in prepaid comprehensive groups practice essentially alike — and interchangeably. The urologist with Kaiser-Permanente has no magic that the practicing physician does not have — or vice versa. In consequence, the notion that preventive medicine could be significantly advanced by reorganizing me and those like me, into another kind of a group, differently financed, is a will-o'-the-wisp.

In actuality, most physicians are concerned that there is over-promise in the notion that prepaid comprehensive group practices or Health Maintenance Organizations offer great gains in economy, efficiency, or quality of medical service. Physicians believe that they indeed have won a place in our pluralistic system, and a right to prove such superiorities as they have, but the cold, unemotional, scientific evidence does not exist which would justify freezing our delivery system into this one pattern. Some doctors like group practice. I do. Some do not. Some patients like it. Some do not.

Many doctors and patients alike sincerely doubt that the country is ready to turn its backs on the flexibilities of an evolutionary approach which has been successful to the extent that it has created the immense demand for still more of its goods and services.

Many physicians are disturbed by non-critical evaluations of utilization statistics. The criteria by which quality of medical service is measured are illusive. There are diseases which may be treated either surgically or non-surgically, and there are those for which there is no good treatment. To pinpoint the problem physicians dislike the need to let financial considerations dictate whether they treat a patient with an enlarging prostate early by surgery, or defer it until it was

mandated by physical distress and deteriorating kidneys. Almost all elective surgery, by definition, could be deferred or omitted, which would make utilization rates look good. But would it be good medicine? And who can judge?

This leads to concerns over quality and quantity controls. Most physicians wish that it were not their obligation to sit in judgment on the work and the pricing practices of our colleagues. But who else can judge whether a treatment of a bladder cancer was competent and fairly charged for, save another qualified urologist? Did a physician choose well among his options of open cutting surgery, or closed electrical destruction by cautery, or cobalt x-ray therapy, or powerful anti-cancer chemicals? It is significant to remember that the patient was originally sent to another physician, in all likelihood, because his primary physician had neither the judgment nor the skill to handle the matter himself. Not even the primary physician would be in good position to assess work of the specialist, except as he acquires experience with the end results. The problem is thorny, and happily physicians have accepted the responsibility for review of the work of their equals.

Physicians have substantial fears, however, that there shall somehow be legislated a quality review obligation which exceeds their capacity to fulfill and which goes beyond the state of the art. The profession needs a great deal of understanding and support, and encouragement to continue its developmental efforts in this field. It would be tragic, indeed, if the profession were goaded into the position of throwing up its hands and turning the job over to someone else. Who could take it on? Insurance adjusters, grand juries, or paid physicians working for governmental agencies?

Physicians are also much concerned with the carrot and the stick concept which seems to assume that dollars are the prime motivating force in a physician's career. Some would follow the Russian system of offering bonuses or better pay to physicians who would take on the less desirable jobs. This has really never worked very well, in civilian life or in the military, and it doesn't work in Russia where they still have to depend on the conscriptive powers of the state to put doctors where they want them.

FLIGHT FROM PRACTICE

Actually, even now the nation has a flight from practice. And the reason is rarely the dollar. Doctors leave lucrative practices to go into teaching, research, specialty training, administration, indus-

trial medicine or simply into premature retirement. They often settle for far less income — and the reasons are multiple. They need to be understood if one is to have any hope of reversing the trend. It is unlikely that it would be far more productive to work with the alternatives which are developing as transportation improves, as two-way communication becomes practical, and as allied medical personnel are appropriately trained to fill the gaps.

The entire manpower problem in medicine is ill-defined. Great commitments to train more physicians may prove to be an extraordinarily expensive and relatively unproductive or inefficient approach. The attitude of the profession is to feel a need for reinforcement in numbers, especially numbers of primary physicians, but there is no established goal. It would be wasteful and uneconomical to overproduce physicians as has been done in the Philippines. Still it is the AMA's stated objective to increase as rapidly as is consistent with the high educational standards the ranks of the practicing medical profession.

The nation needs to be very careful, if it restructures medical practice, that it does not drive out productive practicing physicians. The country must not intensify the flight.

Nonetheless, physicians agree that the barriers standing between patients and needed care be brought down. They have been greatly lowered especially in recent years, but there is much more to do. To accomplish this goal, the AMA has a program, or an inter-related series of programs directed at the several barriers. They are the heart of the activities of the American Medical Association. The financing problem is only one among them.

Our public education programs continue and intensify along with those of the voluntary health agencies, the schools and the government. As organized medicine tears at the barriers of ignorance, fear of physicians and hospitals, superstition, and misplaced faith in unscientific fads and quackeries, of course, it further increases the demand side of the problem.

Professional education activities really dominate in the AMA — with our previously stated support of physician education, and our extensive work in devising educational standards for allied medical personnel. The development of new disciplines calculated to help improve physician productivity, and the devising of new roles for nurses, office assistants, and technicians. To these roles should be added the AMA commitment to take advantage

of the assistance which may be provided by electronic data processing and computer applications in our hospitals and in our practices.

The AMA supports experimentation in how there may be constructive incorporation of consumer representation in problem areas. A committee of distinguished laymen called Citizens Advisory Committee on Health Care for the American People has this objective. It supports Public Law 89-749, The Comprehensive Health Planning Act and urges even greater public and professional input.

The AMA is pioneering ways to make the practicing physician an effective guardian of the public purse for medical care expenditures. In it lies the greatest potentiality for meaningful cost control, economy, and a guarantee that dollars spent shall be dollars well spent. This is something that really can't be legislated. It is a vast new area of physician education — at medical school, internship and residency levels, as a function not only of schools but hospital staffs, county, state and national medical societies, and specialty associations. To the very large extent that the physician serves in the role of purchasing agent for his patient of the goods and services of the medical care industry he should be educated to the job. He has not been so educated in the past, and is not being so educated today.

CONCERNED WITH FACILITIES

Organized medicine is intimately concerned with appropriate provision of facilities — constructing the new — modernizing the old — and devising economical alternatives for expensive in-patient institutions and supports such programs as Hill-Burton grants and the development of planning agencies to avoid gaps and overlaps.

The AMA is also concerned that many of the custodial and domiciliary care problems inherent in aging and long term disability may be more properly identified as non-medical in character, to be dealt with outside of the financing system for personal medical services. Much of this realization has come from experience in the Medicare and Medicaid programs. The AMA hopes to help to clarify the differences between scientific medical problems and those with more of a welfare component.

Obviously the AMA supports medical research — even as it recognizes with a bit of discomfort, that as new techniques and instrumentations are developed to improve diagnosis and treatment, they

(Concluded on Page 233)

Cholesterol Absorption Following Eighty Per Cent Small Intestinal Resection in Dogs

Eighty Per Cent Resection Of Small Intestine In Animals Results In Significant Serum Cholesterol Reduction

By Mark S. Hochberg, A.B. and Henry T. Randall, M.D.

Excessively high serum cholesterol levels in man are associated with progressive occlusive atherosclerosis of coronary and other arteries. The total daily cholesterol absorption in the body is approximately 1250 mg. Of this total, 1000 mg. is manufactured endogenously in the body and brought to the intestine with the bile acids¹, while about 250 mg. is realized through the daily diet.

Attempts at arresting cholesterol absorption have been of various types. One attack has centered on the blockage of cholesterol biosynthesis before reaching the acetate form. This method is very tempting in light of knowledge of several known biosynthesis inhibitors, e.g. benzmalacene, triparanol. However, the blockage may lead to an accumulation of intermediates which may be as deleterious as cholesterol itself. Another suggestion is the dietary restriction of cholesterol and

saturated fats. However, since a good deal of the cholesterol production is endogenous, dietary restrictions may be of little more than psychological value.

A more promising method of reducing alimentary cholesterol absorption is by reducing intestinal absorption by ileal bypass or resection. By removing the major absorption area and decreasing transit time, the hope is that more cholesterol will proceed directly through the gastro-intestinal tract without becoming absorbed or reabsorbed. *In vivo* studies have localized the site of cholesterol absorption in the small intestine, with most absorption occurring in the distal half of the ileum². Ileal bypass and resection experiments performed by Buchwald^{3,4} and Scott⁵ showed statistically significant and prolonged lowering of cholesterol levels in the circulatory system following distal ileal exclusion in dogs and in man.

This work reports changes of serum cholesterol values as well as changes in the rates of cholesterol absorption through the small intestine following resection of eighty per cent of the small bowel in dogs.

MATERIALS AND METHODS

Four puppies (five-ten weeks old) and four adult mongrel dogs were submitted to eighty per cent small intestinal resections (measured along the mesenteric border from the ligament of Treitz to the ileo-cecal valve). The last ten centimeters

MARK S. HOCHBERG, A.B., *second year student, Harvard Medical School, Boston, Massachusetts.*

HENRY T. RANDALL, M.D., *Professor of Medical Science (Surgery), Brown University. Surgeon-in-chief, Rhode Island Hospital, Providence, Rhode Island.*

—From the Division of Surgical Research, Department of Surgery, Rhode Island Hospital, Providence, and Brown University, Providence, Rhode Island.

Supported in part by a USPHS grant #5501RR05644

of the ileum were anastomosed end-to-end to the proximal jejunum. A gastrostomy was also performed to allow tube feeding.

Two methods were used to establish the level of cholesterol in the blood. The first method, developed by Abell⁶, uses the Liebermann-Burchard color reagent to determine plasma cholesterol concentration from which the plasma cholesterol pool can be calculated.

The second method is more specifically concerned with relative rates of absorption following the massive resection procedure. Cholesterol-4-C¹⁴ was delivered through an oral gastric tube into stomach. Each test dose consisted of 50 microcuries of cholesterol-4-C¹⁴ (dissolved in 1.0 ml. of 9:1 benzene:methanol) administered with 2 ml. of corn oil and 10 ml. of milk. Since maximum absorption occurs from 24-72 hours after administration^{7,8}, 4 ml. of blood was drawn daily for three days following the dose. The complete procedure was carried out 10 days prior to surgery, 21 days postoperatively, and 42 days postoperatively. Since prior to operation the level of plasma cholesterol radioactive uptake was checked, each dog was thus able to serve as its own control. A scintillation counter was utilized to determine serum radioactivity.

RESULTS

The four adult dogs responded fairly well following the eighty per cent resections and showed impressive drops in total serum cholesterol levels as well as cholesterol absorption ability. However, the four puppies did not tolerate the procedure and died with evidence of malnutrition within three to six weeks following the resection. While cholesterol level changes achieved three weeks postoperatively were interesting, the fact that the 80 per cent resection impairs growth and development renders it an unrealistic cholesterol control mechanism in young dogs.

However this was not the case in the four adult dogs studied. The weights of these dogs, after initially declining, stabilized and in three instances even showed a slight increase (Fig. 1). Postoperative electrolyte values compared favorably to the preoperative control values.

Three weeks postoperatively the total serum cholesterol decrease of the four adult dogs was twenty-five per cent with a standard deviation of 6.5 per cent (Table 1). It is important to note that these decreases were achieved in dogs with initially normal cholesterol levels (Fig 2).

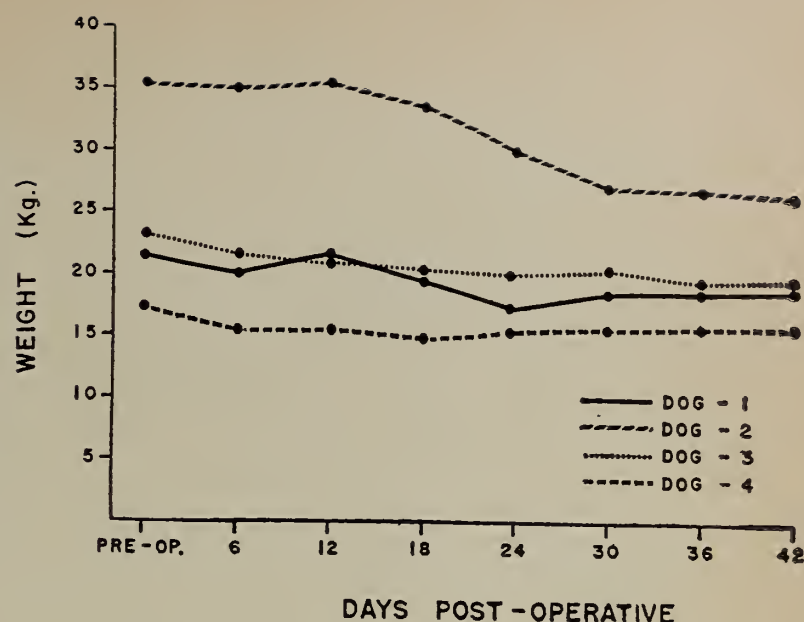


Figure 1. Weight changes of dogs over the six week period of study following eighty per cent small intestinal resection.

Table 1
TOTAL SERUM CHOLESTEROL LEVEL
CHANGES FOLLOWING 80% RESECTION

| | Preoperative level | Three weeks postoperative | | Six weeks postoperative | |
|-------|--------------------|---------------------------|----------|-------------------------|----------|
| | | level | % Change | level | % Change |
| Dog 1 | 137.5mg./100ml. | 105.2 | —23% | 90.6 | —34% |
| Dog 2 | 157.3 | 111.9 | —29% | 90.8 | —42% |
| Dog 3 | 130.1 | 105.4 | —19% | 98.8 | —24% |
| Dog 4 | 103.5 | 73.2 | —29% | 65.9 | —36% |

Mean 25%±4 Mean —34%±6

The second parameter of cholesterol change following the 800 per cent resections is the alteration in the intestinal absorption capacity. Table 2 shows that three weeks postoperatively the rate at which the labelled cholesterol appears in the plasma is 38 per cent \pm 5 per cent less than the preoperative control results. Six weeks after the operation the rate of absorption diminished by 77 per cent \pm 2 per cent (Fig. 3).

The four puppies who died from three to six weeks after the operation showed a fifteen per cent serum cholesterol decrease and a sixty-eight per cent rate of absorption decrease three weeks postoperatively (just prior to death).

DISCUSSION

Cholesterol is one of the most nearly universal organic compounds in the animal world.. Although it is one of the oldest in terms of recognition and isolation⁹, its functions are still not fully understood. Among the many roles attributed to cholesterol the most significant are (1) a transport ve-

(Continued on next page)

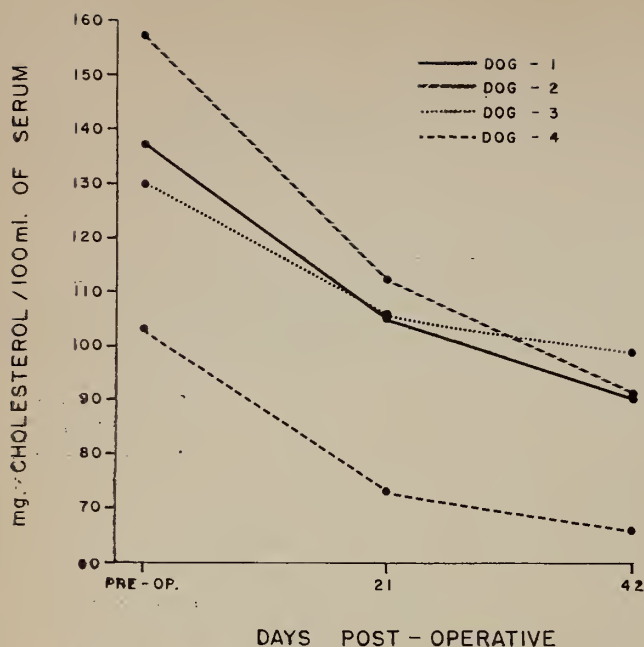


Figure 2. Total serum cholesterol concentration changes following eighty per cent small intestinal resection.

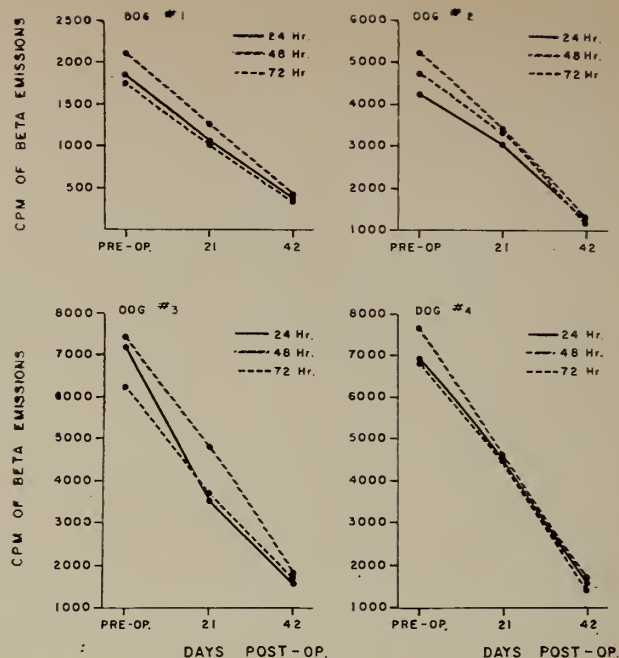


Figure 3. Changes in intestinal absorption capacities of cholesterol following eighty per cent small intestinal resection shown as CPM/4ml. blood at 24, 48, and 72 hours after a standard test dose of cholesterol-4-C¹⁴.

Table 2
CHANGES IN RATE OF CHOLESTTEROL-4-C¹⁴ (50uc) ABSORPTION FOLLOWING 80% RESECTION

| | Preoperative level | | Three weeks postoperative level | % change | | Six weeks postoperative level | % change |
|-------|-----------------------|------|---------------------------------|----------|--|-------------------------------|----------|
| Dog 1 | 1846.35 CPM at 24 hr. | | 1060.40 | —43% | | 392.72 | —79% |
| | 2109.45 at 48 hr. | | 1253.92 | —41% | | 406.20 | —81% |
| | 1759.70 at 72 hr. | | 1004.00 | —43% | | 356.67 | —80% |
| Dog 2 | 4205.85 | | 3017.00 | —28% | | 1231.92 | —71% |
| | 5201.15 | | 3428.50 | —34% | | 1262.50 | —76% |
| | 4706.42 | | 3359.00 | —29% | | 1192.74 | —75% |
| Dog 3 | 7199.32 | | 3622.20 | —49% | | 1569.00 | —78% |
| | 7460.00 | | 4825.50 | —35% | | 1835.00 | —75% |
| | 6230.42 | | 3679.35 | —41% | | 1765.00 | —72% |
| Dog 4 | 6902.10 | | 4481.60 | —35% | | 1577.00 | —77% |
| | 7661.00 | | 4564.80 | —40% | | 1714.67 | —78% |
| | 6847.14 | | 4570.70 | —33% | | 1398.47 | —80% |
| | | Mean | | —38%±5 | | Mean | —77%±2 |

hicle for fatty acids; (2) an integral structural unit of various tissues, e.g. blood vessel walls; (3) a lubricant in the skin; and (4) a precursor of other steroids such as bile acids and sex hormones.

Atherosclerosis is the most common of all conditions affecting blood vessels. Specifically it lowers the vessel capacity by decreasing its lumen, with consequent increase of peripheral resistance. Thrombosis or rupture of the arteries may ensue often with fatal consequences. Changes in the vessel lumen proceed progressively. The earliest lesions are tiny, gelatinous droplets in the intima of the arteries. More advanced lesions show an increased amount of fat (atheroma) and subse-

quently a great fibrous thickening and calcification of the walls (atherosclerosis). The most significant event to the arteries in atherosclerosis then is the accumulation of lipid materials of which cholesterol is undoubtedly the most important. This has been demonstrated by Bottcher and Woodford⁹⁰.

The eighty per cent small bowel resections reported in this paper have impressively lowered cholesterol levels in adult non-cholesterolemic dogs. This suggests that the body will not compensate by restoring a normal cholesterol level in the face of major small bowel resection.. The rate of loss of cholesterol in these experiments appears

(Concluded on Page 230)

Rectal Obstruction Due To Carcinoma Of The Prostate

Complication Does Not Necessarily Indicate An Ominous Prognosis

By John R. Stuart, M.D., and William S. Klutz, M.D.

Rectal obstruction due to carcinoma of the prostate is relatively uncommon. To date, there are approximately 168 cases of rectal involvement by prostatic carcinoma reported in the literature^{1,7,9, 11-19, 22-24}. Fourteen cases required for relief of the obstruction; of these a followup is reported in only six (Table I).

Three additional cases are reported, two of whom required colostomy. These cases are presented in order to emphasize that precise tissue diagnosis and therapy can often reverse the obstructive process.

CASE REPORTS

Case 1: An 82-year-old white male had eight years previously undergone a suprapubic prostatectomy for clinically benign hypertrophy. Histologic examination revealed a poorly differentiated adenocarcinoma. The patient was placed on estrogen therapy. Five years later, a constricting lesion of the lower rectum was found. Biopsy revealed carcinoma of the prostate with rectal invasion. Colostomy was necessary to relieve the obstruction

JOHN R. STUART, M.D., *practicing physician, Providence, Rhode Island; Director, Division of General Surgery, Roger Williams General Hospital.*
WILLIAM S. KLUTZ, M.D., *practicing physician, Providence, Rhode Island; Director, Division of Urology, Roger Williams General Hospital.*

Table 1

| Author | Cases | Follow-Up |
|-----------------------|-------|--|
| Davis ⁵ | 4 | 2 cases lived 9 months each |
| Davis ⁶ | 1 | No follow-up |
| Graves ¹¹ | 2 | No follow-up |
| Hartman ¹² | 1 | Lived 6 months |
| Jackman ¹³ | 1 | No follow-up |
| Kickham ¹⁵ | 2 | 1 lived 6 months 1 lived 23 days |
| Lazarus ¹⁷ | 1 | Lived at least 7 months in good health |
| Winter ²² | 1 | Lived 6 months |
| Stuart | 2 | 1 alive at 3 years 1 lived 2 months |

and orchiectomy was performed. Since then, the rectal lumen has enlarged sufficiently to allow bowel movements. The colostomy has continued to emit some gas and minimal stool. At present, with a three year follow-up, the patient is working and has shown no further extension of his prostatic malignancy and no evidence of metastases.

Case 2: A 74-year-old white male noted urinary frequency and nocturia of six months' duration and a change in bowel habits for one month prior to admission in March of 1969. Biopsy of a partially obstructing rectal mass revealed infiltrating adenocarcinoma of the prostate. Bilateral orchiectomy was performed, and the patient placed on estrogen therapy. Seventeen months later com-

(Continued on next page)

plete rectal obstruction occurred for which colostomy was necessary. The patient was placed on chemotherapy. He expired two months later from multiple cerebral metastases. Digital rectal examinations during his two month survival revealed an increase in the rectal lumen, and rectal bowel movements occurred.

Case 3: A 49-year-old white male complained of rectal bleeding of two months' duration and a change in bowel habits one month prior to admission in September of 1968. The patient required enemas in order to move his bowels. A stenotic rectal lesion was found, biopsy of which revealed adenocarcinoma of the prostate. Bilateral orchiectomy was performed and the patient was placed on estrogen therapy. The patient expired four months later at another hospital presumably from a pulmonary embolus. Prior to death, rectal bowel movements occurred, and digital examination revealed an increase in the lumen.

In Cases 1 and 2 rectal obstruction was not permanent, bowel movements resumed after onset of therapy and digital examination revealed an actual increase in the rectal lumen. In Case 3, the partial rectal obstruction did not require colostomy, but a salutary effect on the rectal mass was noted following bilateral orchiectomy and estrogen therapy.

Several classifications of prostatic carcinoma involving the rectum have been proposed by Lazarus¹⁷, Jackman and Anderson¹³, and Winter²². Three general types of involvement are identified which are in order of frequency: 1) extrarectal carcinoma of the prostate causing obstruction by diffuse involvement and stricture formation without rectal mucosal involvement (approximately 40 per cent); 2) direct extension through the rectal wall with the formation of a fungating intraluminal tumor (approximately 35 per cent); 3) involvement of the rectal wall with formation of an intrarectal tumor with subsequent rectal obstruction, without involvement of the rectal mucosa (approximately 25 per cent). Numerous authors have called attention to the fact that carcinomatous obstruction of the rectum may be due to prostatic neoplasia. Failure to consider this or failure to obtain adequate biopsy material may result in treatment wholly unsatisfactory for the disease process. The literature contains reports of abdomino perineal resection done for prostatic carcinoma causing obstruction¹⁹⁻²². Table I lists a follow-up available on colostomies performed for rectal obstruction due to prostatic carcinoma.

The incidence of prostatic malignancy is quite high. Flocks⁸ in 1965 stated that men between 70 and 79 years of age had a 43 per cent incidence of prostatic carcinoma. Scott²¹ in 1969 stated that step sections of the prostate gland 4mm apart revealed twice the incidence of prostatic carcinoma compared with random sections. He reported that men over the age of 70 have a probability of almost 50 per cent of incurring a prostatic carcinoma.

Patients treated for advanced or metastatic prostatic disease by means of orchiectomy, estrogen therapy, or both respond very favorably. Initially, orchiectomy, estrogen therapy, or both seem to be equally effective in controlling advanced metastatic carcinoma of the prostate in about 70-80 per cent of the patients²⁰. Patients treated in this manner may have a five year survival of 49 per cent with a stage 3 prostatic carcinoma and 23 per cent with a stage 4²⁵.

These statistics indicate that carcinoma of the prostate is common, usually has a good response to treatment, and may permit a prolonged survival.

Rectal obstruction due to carcinoma of the prostate does not indicate a more ominous prognosis than that of the current stage of the carcinoma itself. Favorable response to treatment may be expected even if a colostomy is necessary. Furthermore, in our experience rectal obstruction is not permanent and may relent.

CONCLUSION

Three cases of rectal obstruction caused by silent carcinoma of the prostate have been presented. The need for prompt recognition and treatment of the underlying disease is emphasized, since a favorable response can often be expected.

REFERENCES

- ¹ARNHEIM FK: Carcinoma of the prostate: A study of postmortem findings in one hundred and seventy-six cases. *J Urol* 60:599-603, Oct 48
- ²BARRINGER BS: Carcinoma of prostate. *Surg Gynec Obstet* 34:168-76, Feb 22
- ³BAUM WC, McCLELLAN RE: A Prostatic annular constricting lesion of the rectum: A diagnostic challenge. *Ann Surg* 141:991-4, Jan 55
- ⁴BECKER JA: Prostatic carcinoma involving the rectum and sigmoid colon. *Amer J Roentgen* 94: 421-28, June 65
- ⁵DAVIS JM: Carcinoma of the prostate presenting as disease of the rectum. *Brit J Urol* 32:197-203, June 60
- ⁶DAVIES AL: Prostatic carcinoma presenting as acute obstruction of large bowel. *Cancer* 20:1035-37, June 67
- ⁷DEMING CC: Results in one hundred cases of cancer of the prostate and seminal vesicles treated

(Concluded on Page 231)

Medical Collections At The American Antiquarian Society

Author Describes Important Medical Resource Material

By Marcus A. McCorison

The only known copy of the first American medical publication is located at the American Antiquarian Society. Entitled *God's Terrible Voice in the City of London*, (Fig. 1), the pamphlet was written by the Reverend Thomas Vincent and describes the plague of 1665 and the fire of 1666, with a list of the dead. The pamphlet was printed in Cambridge, Massachusetts, by Marmaduke Johnson in 1668 but first appeared in London the year previous. It was reprinted from time to time, the last in 1831. Vincent's purpose, of course was that of an Old Testament prophet — he described God's wrath toward His children and showed how with fire and plague He punished sinners for their transgressions.

The American Antiquarian Society, located at 185 Salisbury Street, Worcester, was founded by the printer and publisher Isaiah Thomas as the first national, historical Society in the United States. Since 1812 the members and staff have energetically collected American printed works and manuscripts which illuminate the history and culture of the nation. Its collections of American

(Continued on next page)

MARCUS A. MCCORISON, *Director and Librarian of the American Antiquarian Society, Worcester, Massachusetts*

Reprinted from the February, 1971 issue of the Worcester Medical News with the permission of the author and the publication.

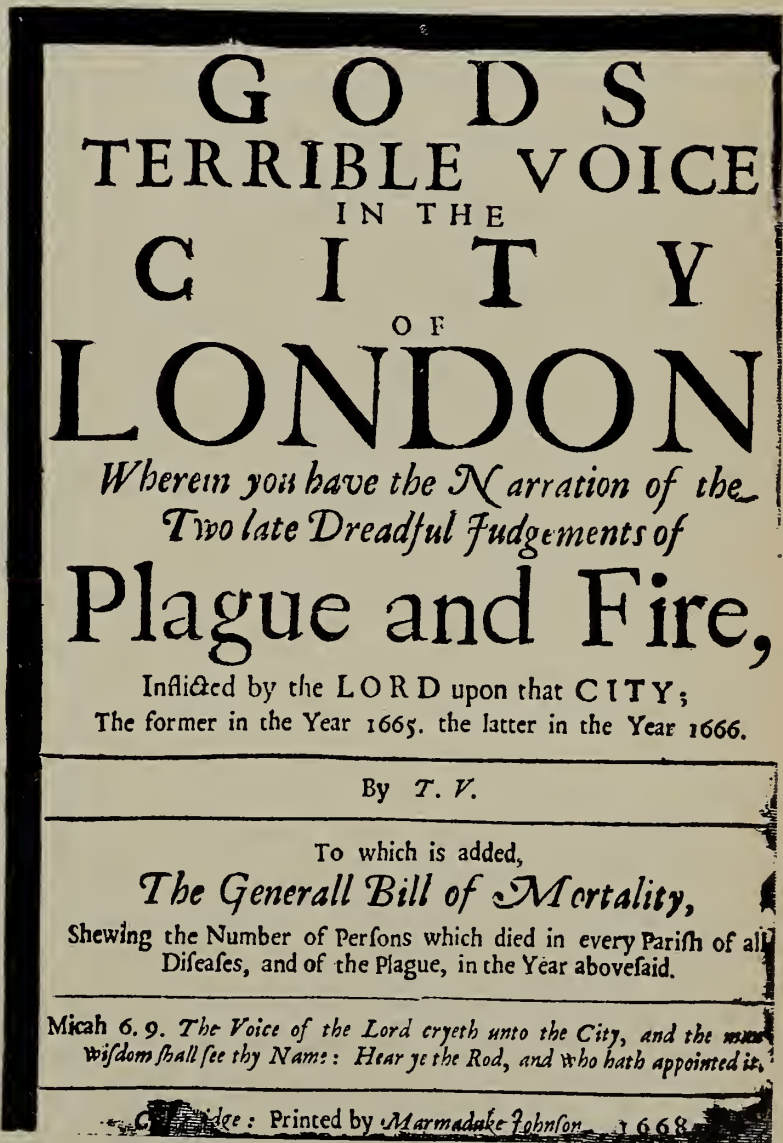


Figure 1

KINE POCK INSTITUTION

BY DR. WATERHOUSE.

BY applying at this institution in the EXCHANGE BUILDING, Boston, *Sailors* may be inoculated agreeably to an arrangement made for their particular benefit.

All other persons may, by applying to the same place, be inoculated at a reasonable fee.

The room is at the top of the stairs leading up to the District Court, from the front door, or post office entry; where Dr. Waterhouse or his assistant, Mr. Fancher, will attend to all, who may either call, or send a line, expressing a wish to be visited at their own houses.

A branch of this Kine Pock Institution is kept at Dr. Waterhouse's dwelling house

where parents may send their children, with perhaps more conveniency than to the Exchange. Attendance will be given here *every hour of every day*.

It has been thought, that the peculiar nature of this extraordinary gift of Providence will justify the dispensation of this blessing on the morning and evening of every *sabbath*; more especially to Seamen, and some others, who cannot attend on working days.

Vaccine matter, preserved and put up in a peculiar way, may be had at all times, at a fixed price (*viz.* five dolls.) in imitation of the *Vaccine Institution* of London.

Figure 2

printed matter of the seventeenth and eighteenth centuries are the strongest in existence.

God's Terrible Voice is only one of more than 1,250 medical books at AAS printed in the United States before the year 1821 — just about sixty *per cent* of all such books which were published in the early years of the nation. The Society's holdings also include good runs of nineteenth century medical periodicals. AAS subscribes to the *Journal of the History of Medicine* and to the publications of the Wellcome Institute of the History of Medicine. Thus, the Society is equipped to materially assist serious inquiries into the history of American medicine and the staff cheerfully welcomes the same.

Another important possession of the Society is the still unpublished medical manuscript of Cotton Mather, 'The Angel of Bethesda.' Written in 1724, Mather begins his treatise by equating disease with evil and states, 'Mankind has been sadly puzzled about The Origin of Evil.' Mather, a transient between medieval and modern worlds, in his final major work, brings to bear all of his past theological and scientific knowledge on the problem that is yet the root of man's ills. He suggests not only doctrinal answers to the problem but also scientific possibilities. He was the only eighteenth century American writer to discuss the germ theory. The 410-page manuscript has been

SYSTEMATIC TREATISE,

HISTORICAL, ETIOLOGICAL, AND PRACTICAL,

ON THE

PRINCIPAL DISEASES

OF THE

INTERIOR VALLEY OF NORTH AMERICA,

AS THEY APPEAR IN THE

CAUCASIAN, AFRICAN, INDIAN, AND ESQUIMAUX VARIETIES OF ITS POPULATION.

BY DANIEL DRAKE, M. D.

CINCINNATI:

WINTHROP B. SMITH & CO., PUBLISHERS
PHILADELPHIA: GRIGG, ELLIOT & CO.
NEW YORK: MASON & LAW.

1850.

Figure 3

in the Society's collections since 1816 when it was purchased by Isaiah Thomas from the granddaughter of the author. It was 'discovered' by Olivtr Wendell Holmes in 1869 and is now (1971) being edited for publication.

Although the primary emphasis of the Society has been on early materials, the collections are now being extended into the nineteenth century and during the past few months the Society has acquired such things as an [1810?] broadside of Benjamin Waterhouse's (Fig. 2) in which he informs sailors that they may be inoculated against Kine Pock at his Kine Pock Institution in the room at the head of the stairs. Waterhouse (1754-1846), a resident of Boston, made his greatest contribution to American medicine by his espousal of vaccination for immunity against the ravages of smallpox. Between the years 1799 and 1810 he directed his very considerable energies toward the acceptance of vaccination and his clinic, men-

(Concluded on Page 231)

MISQUOTE MANUFACTURES MISINFORMATION

In a recent appearance before the Health, Education and Welfare Committee of the Rhode Island Senate on March 16, 1971 Doctor P. Joseph Pesare, Medical Director of the medical care program in the Rhode Island State Department of Social and Rehabilitation Services, outlined with charts and diagrams the many contributions and free services doctors in the State of Rhode Island have provided for many years to welfare recipients. This help has continued even since the advent of Medicaid.

Doctor Pesare was misquoted in the news media on the day following his presentation before the Senate committee to the effect that physicians were largely responsible for increased welfare medical costs. To set the record straight Doctor Pesare submitted a copy of that presentation to the Medical Society. The facts are quite to the contrary.

State Senate HEW Committee members heard Doctor Pesare relate the number of medical services provided without charge by physicians of Rhode Island for eligible recipients of Public Assistance for the years 1958-1964. During this time physicians' hospital visits, surgical services, obstetrical deliveries, tonsillectomies and adenoidec-tomies, and physicians' services in the many outpatient programs of the hospitals throughout the State were provided voluntarily and without compensation, resulting in an annual saving of hundreds of thousands of dollars to the State of Rhode Island. In 1958 there were 76,963 medical services donated at a cost saving to the State of \$522,149. Rated costs of these services were determined by the State, and the figures quoted are those of the State itself. In 1960 the State reported 95,397 doctor medical services donated for a saving of \$684,340. In 1962 the figure rose to \$778,484; by 1963 doctors' voluntary contribution of medical services had risen to \$834,618.

During this same period the Congress, recognizing that poor people and especially the aged needed a comprehensive range of health services realistic in terms of the health expenses and financial resources of people, passed the Kerr-Mills Act. In 1964 Rhode Island implemented the Act, making provision for the 45,000 of the State's citizens who were 65 years of age and older to purchase services through the Rhode Island Medical Assistance for the Aged (MAA) program. With the ad-

vent of the MAA Program in 1964 physicians continued to render services in the outpatient departments of the hospitals without charge.

By 1965 the President of the United States in his message to the Congress on "Advancing the Nation's Health" proposed a massive health package, and Congress passed into law everything he requested. That sweeping health legislation, which included Medicare and Medicaid, set in motion a wave of expectations and an ensuing awareness of the limitations of facilities and manpower necessary to provide for everyone's needs. The debate on the resulting problems continues, often with more emotion than insight.

For the first time ever as of January 1, 1967 with the implementation of Title XIX (Medicaid), physicians received reimbursement for some medical services under the Rhode Island Medical Assistance Program. Doctor Pesare said to the Committee, "During the period July 1, 1966-July 1, 1968 reimbursement for physician surgical services was provided on the basis of Rhode Island Blue Shield Plan A. Since July 1, 1968 reimbursement for surgical services is provided on the basis of Blue Shield Plan B. It should be noted that the surgeons of Rhode Island continue to make a substantial contribution to the care of eligible recipients of Public Assistance. The Rhode Island Blue Shield Plan B surgical fee schedule represents reimbursement at the rate of 69 per cent of the usual and customary fees of surgeons as certified and approved by the Fiscal Intermediary of Federal Medicare as prevailing in 1966. This certainly substantiates the fact that those physicians providing surgical services are making a substantial contribution to the Medicaid Program. It should further be noted that, for those patients not also eligible for Federal Medicare, this represents full and total payment."

As of 1964 physicians began to receive from the Welfare Department \$5.00 for an office visit and \$7.00 for a home visit. With the advent of Medicaid in 1967 the number of welfare patients in whose behalf some reimbursement to physicians was provided was revised upwards with inclusion of both the MAA recipients and the Public Assistance recipients. This conservative schedule provides a

(Continued on next page)

payment of \$10.00 for an initial office visit and \$5.00 for each visit after the first. Payment for additional family members seen during the same office visit is limited to \$3.00 for the third member seen, with no payment for the fourth and additional member(s) of the same family examined and treated by the doctor. A husband and wife with three or more children who receive complete medical check-ups in their own private physician's office sign a voucher in triplicate which the physician submits to the State Department of Welfare. If everything is in order the physician some time later is reimbursed to a maximum of \$13.00. If this same family visited the outpatient department of a local hospital (where no physician charge is made) the hospital would routinely bill the State Department of Welfare over \$100.00 and for the same services provided by the physician in his office for \$13.00. Since January 1, 1971 physicians have received, on a sliding scale according to their 1969 profiles, up to a maximum of \$10.00 for a return office visit.

Fees paid to doctors by the Social Welfare Department are frozen at mid-1968 levels, while the salaries of their office help and allied health workers, laboratory costs, and taxes continue to climb. Medicare was founded on an open-end basis as far as hospitals are concerned. As costs have climbed, reimbursement in full has followed. Medicaid in most instances reimburses hospitals and local health centers in full for most services, even when the physician component of the services is provided for through other mechanisms. Medicaid payments at various levels for the same or equivalent services provided under differing auspices have caused a deepening sense of frustration within the medical profession.

Doctors work long hours, everyone seems to agree. The social planners continue to receive grant monies for determining how best to provide for the health needs of the population. Welfare has had for a long time many sponsors, but erratic financing. Neither the planning nor the financing will be adequate unless the ultimate provider of service, the physician, is given encouragement to continue his long work hours and to maintain his personal concern for his patient's well-being. He must somehow be made a party to the planning and a part of the system, and he must be adequately reimbursed for his services.

Senator Raymond E. Grimes disparagingly described doctors' visits to patients as simply a "Hello Joe", or "Hello Jim". In reply Doctor

Pesare carefully explained: "We have always provided careful control of visits by physicians who have provided medical services for eligible recipients." "Believe it or not," Doctor Pesare continued, "there have been many physicians who have provided medical services for eligible recipients without ever submitting a bill for these services. At the same time we have many physicians who never indicate what is expected in the way of reimbursement for a service, but simply leave the space for indicating the charge blank."

It certainly is, as the Senator suggested in his remarks, a new ball game. Hopefully, the State Senators on the HEW Committee will carefully examine the information provided to them by the Social Welfare Department on the total expenditures for recipients who were in the money payment categories and those who are merely medically needy. It is significant to note the analysis by type of service and where the bulk of the money went. For the period July 1, 1969-June 30, 1970 seventy-eight per cent of the total medical expenditures were paid to fixed installations: Public institutions 32 per cent (\$11,700,000), Community Hospitals 22 per cent (\$8,000,000), Hospital Outpatient Department Services 4 per cent (\$1,600,000); Skilled Nursing Homes and Intermediate Care Facilities 20 per cent (\$7,200,000). The remaining 22 per cent went to Pharmacy 10 per cent (\$3,700,000), Physicians 8 per cent (\$3,000,000), Dentists 4 per cent (\$900,000) and other services 2 per cent (\$700,000).

The HEW Committee might look not only at the services contributed by physicians to the State of Rhode Island but also at the tax cost of all services to the State. The Rhode Island Medical Society offers its full cooperation in the development of a sensible Welfare Program with full physician participation in providing the best possible medical care within a system of total health services for the people of Rhode Island. While it is wasteful to develop a system that can spend far more than is required, it is nevertheless dangerous to create one that cannot provide enough effective services to meet the needs. In seeking a successful approach to the welfare problem, we must ask: Whom does this system serve? What is this system supposed to accomplish? How can one measure its performance? What resources, people, equipment, money are available? What results will any given combination of resources produce? How can we (all of us) obtain an improved welfare program from available resources?

CLAUDE EMERSON WELCH, M.D.

At the January session the House of Delegates of the Rhode Island Medical Society, the following action of the Council of the Society was affirmed:

The Council, noting that Dr. Claude E. Welch of Boston, an outstanding surgeon who is widely-known, has been nominated by the Massachusetts delegation as nominee for the office of President-elect of the American Medical Association, recommends to the House of Delegates that it record the support of Rhode Island for his election.

An announcement to the Delegates of the American Medical Association of Doctor Welch's Presidential candidacy was endorsed by Doctor Richard P. Sexton, President of the Rhode Island Medical Society.

In a brochure accompanying the announcement the President of the Massachusetts Medical Society and its delegation to the American Medical Association described Doctor Welch in these words:

Claude Welch is highly respected on a national level for his superior professional qualifications as a practicing surgeon and teacher, for

his fidelity and dedication to the purposes of American medicine, for his incredible, untiring and persistent efforts on behalf of the profession. We are convinced he has those qualities so necessary to unify all branches of medicine in the common cause of providing high quality medical care to all persons in a free society.

Claude Welch has on numerous occasions addressed audiences in Rhode Island on surgical and other subjects. He is well known and respected by his Rhode Island friends and colleagues, among whom are several medical school classmates. His kindness, wisdom, and judgment are no less admired than his intellectual qualities. We are honored and pleased to join with our Council, House of Delegates, President, and AMA delegation in endorsing his candidacy for President-Elect of the American Medical Association and urge his election to that important position in American medicine.

A biographical summary of Doctor Welch is included for the information of our readers.



BIOGRAPHICAL SUMMARY OF CLAUDE E. WELCH, M.D.

Doctor Welch was born in Stanton, Nebraska, in 1906. A graduate of Doane College he obtained an M.A. in chemistry from the University of Missouri, and his M.D. from Harvard in 1932.

Since that time his professional life has been centered in Boston, first at the Boston City Hospital and then at the Massachusetts General Hospital. He has been in the private practice of surgery since completing his residency in 1937 and for several years has been associated with other general surgeons centered in the MGH.

In addition to the practice of surgery, he has been particularly interested in the teaching of surgery, both at the undergraduate and graduate level. He is Clinical Professor of Surgery at Harvard and has organized and presented postgraduate courses in general surgery and in malignant disease. He is the author of several books, one of which, "Surgery of the Stomach and Duodenum," is now in its fifth edition. He has written innumerable articles on abdominal surgery and has presented papers on various subjects in approximately thirty-five states and fifteen foreign countries.

In the United States he has received many honorary memberships in surgical societies including those in Los Angeles, Portland (Oregon), Dallas, Kansas City, St. Paul, and New York. He has served as visiting professor in Montreal, Beirut, and Melbourne, Australia, as well as in many schools in the USA. He has received the honorary degree of Doctor of Science, both from his alma mater and from the University of Nebraska. In addition, he is a member of an impressive number of professional societies, and has served as president of many of them.

During World War II, he spent four years in service in the Army in the Mediterranean Theater and was discharged in 1946 as a lieutenant colonel.

He has been councilor of the Middlesex South District Medical Society of the Massachusetts Medical Society for the past twenty years.. He was President-elect of the Massachusetts Medical Society in 1964-65, and President, 1965-66. He has served on numerous committees of the Society. Important chairmanships include the Committee

(Continued on next page)

on Publications, which is responsible for the publication of THE NEW ENGLAND JOURNAL OF MEDICINE. His biennial articles on progress in abdominal surgery have been featured in the Journal for the past twenty years. As chairman of the Society's Committee on Long-Range Planning, he spearheaded a complete redraft of the charter of the state society which had remained in force with the state society with occasional amendments since 1781. This revision was written into law by the state legislature in 1969.

He served as an Alternate Delegate to the AMA in 1951, and has been a Delegate since 1967. He was appointed the AMA representative on the Joint Conference Committee for Graduate Education in Surgery by the Council on Medical Education in 1962 and served on various reference committees of the House of Delegates and in 1969 as elected chairman of the Ad Hoc Committee on

Long-Range Planning and Development. In 1970 he was chairman of the scientific program that prepared the Boston Clinical Program for the AMA meeting in Boston. He is a member of the newly constituted Section Council in General Surgery.

He has been very active in the American College of Surgeons, first as a Governor, and then for the last seven years as a Regent. The College of Surgeons encounters many of the problems faced by the AMA. Important chairmanships that he holds at present include those of the Scientific Program and of Surgical Education in Medical Schools.

In addition, he has been a member of the Massachusetts Advisory Council on Title XIX (appointed by Governor Volpe in 1967), of the Greater Boston Hospital Planning Committee, and a trustee of the Tri-State Regional Medical Program (1965-70).

INDICATIONS OF THE QUALITY OF AMERICAN MEDICINE

The Nobel Prize in Physiology and Medicine is recognized throughout the world as one of the highest awards in medicine. Since 1950 Americans have won awards in 16 of the 21 years. Further, in the 20 year period prior to 1950, Americans had won awards on 9 separate occasions. By contrast, from 1910 to 1930, Americans had won Nobel Prizes in Physiology and Medicine in only 3 of the years.

Since the beginning of the Nobel Prize awards in 1901, American Medicine has steadily improved and is now a frequent winner among the countries of the world. Our most recent laureate Doctor Julio Axelrod, a 1970 winner, has maintained the tradition of American medicine with his excellent work on the mechanisms which regulate the formation and inactivation of norepinephrin.

This year's Lasker Awards suggest a high level of sophistication in American Medical research. Doctor Earl W. Sutherland, one of the two Lasker Award winners, described a new chemical intermediary, cyclic adenylic acid (AMP), and demonstrated that it participates in a wide range of biochemical and physiological control and regulatory mechanisms. The other winner, Doctor Robert A. Goud, "transplanted bone marrow cells into immunologically deficient children, thus reconstitut-

ing both systems of immunologically active cells and saving the children from heretofore uniformly fatal infection."

As an appropriate climax to these gratifying events Oxford University in Great Britain recently reached across the Atlantic to invite Doctor Paul B. Beeson of Yale University to assume a chair in its medical school and the prestigious title of Nuffield Professor in Clinical Medicine.

Each year a stream of the graduates of foreign schools is attracted to the United States for training in general medicine and the specialties. In some foreign countries the chances for promotion are markedly increased if one has had at least part of his training in the United States. The large volume of excellent medical research in America as reported in medical journals of world-wide circulation and the names of famed teachers and investigators are a powerful attraction for these temporary visitors. Some foreign graduates who receive their post doctoral training in America return to their own countries and become world renowned in their own right. One such individual is Christian Barnard. The great medical centers of North America now offer the attractions which were once the hallmark of England and the continent.

A NEW CAREER FOR SCIENTISTS

Recent reports indicate a high degree of unemployment among scientists and engineers in such high density technological areas as the Route 128 complex near Boston, Southern California, and Washington, D.C. The surplus of Ph.D.s, engineers, and other scientists is particularly evident in physics and the engineering sciences. The change in status of these specialists from one of short supply to that of relative unemployment is due to several factors including the waning of the Sputnik panic, the peaking of the aerospace activities late in the 1960s with subsequent layoffs in factories, the discontinuance of many research grants and contracts, and the recent business recession. The federal budget for research and development (R & D) for fiscal year 1971 is less in actual dollars than previous budgets, and still lower in actual buying power.

A return to federal grants and projects for R & D is probable over a period of time. In fact, with a return of business activity there has already been some rehiring.

However, we are interested in this group of highly trained and educated individuals as a pool of scientists who might become involved in medically related scientific investigation. We are told that most of the electronic gadgetry currently available in medical research and laboratory procedure is fall-out from the aerospace industry.

With the phasing out of a large part of the military-aerospace-industrial complex, it would seem to be an ideal opportunity for the development of a medical-industrial complex which would have as its primary interest the development of electronic and computer techniques and hardware directly applicable to medical problems. Federal grants for this purpose could have the same stimulating and productive results as have military and space grants in the past. While the medical schools should participate in this program, a change of emphasis in this regard from the research grants of the Fogarty Era to grants supporting teaching, development of community medicine, and the capital needs of the schools is in order.

The intelligent scientists and engineers currently without employment, although highly specialized in aerospace and military technology, should be susceptible to retreading without too painful an adjustment to medical engineering and electronic pursuits. This valuable pool of educated and creative individuals is a resource waiting to be absorbed into medical research and development. An appropriate system of grants to industry for medically related projects would bring these men back into the mainstream and make their special high skills available for projects more directly beneficial to man than guns and spaceships.

POPULATION CONTROL

No one can doubt the necessity for population control. The medical profession must assume the burden of bringing it about. All the methods so far proposed and carried out depend for success on more intelligence, foresight, cooperation, and ready cash than a large number of people possess. We are in some danger of limiting only the best.

Vasectomy is becoming more popular and has much to recommend it. We should consider recommending that the state establish free vasectomy clinics, staffed by trained technicians, under professional supervision.

HAROLD G. CALDER, M.D.

(Continued on next page)

NUTRITION, ECOLOGY, AND THE VOICE OF REASON

Magnus Pyke, dean of British nutritionists, reporting in a recent issue of the *New Scientist* on the recent Congress of Food Science and Technology commented: "It is well known, but neglected by the popular mind, that casualties and deaths from microbiological invasion of food can be numbered in thousands in a technological battle fought on many fronts, while to be struck by lightning is commonplace when compared with injury by *cyclamates*, about which three continents have been convulsed." Food infection by *Clostridium botulinum*, *Clostridium perfringens*, *Bacillus cereus*, *staphylococci*, *Salmonella*, and the viruses of infectious hepatitis still are serious, major, and important medical problems, causing a morbidity and mortality that is worthy of the new emphasis on purity from bacterial contamination in foods. About DDT, Professor Sai of the University of Ghana is reported to have asked whether it is more important to ban it and preserve golden eagles, or to use it and prevent the spread of malaria in Africa. On the technological side it must satisfy some peculiar curiosity of the human mind to know that now more than half the total tonnage

of potatoes grown in the United States is converted into the instant dehydrated type, and that the California tomato crop is now harvested exclusively by machinery. Furthermore, in that complex of food, pleasure, and satiation, the noises of chewing and masticating cannot be underestimated.

Should the day come when synthetic foods supply much of the world's needs, the Swedish Institute for Food Preservation and Research has already in anticipation of that day devised means and methods of producing the consistency and the noise which is absolutely necessary to make *Homo sapiens* enjoy his meal. It is safe to say that nowhere in human behavior are fads and notions more prevalent than in the field of man's nutrition. It is believed by many that in Biblical times apples grown in the Garden of Eden had unusual nutritional properties; the same can be said of the mandrake root. Even those designated as scientists are not guiltless in matters of food fadism, to wit: cyclamates, safflower oil, and Vitamin E, to list but a few. Magnus Pyke does well to raise his "voice of reason."



THE AMERICAN CANCER SOCIETY

PRESENTS THE ANNUAL

George W. Waterman Cancer Dialogue

Monday, May 24, 1971

11:00 A.M. - 1:00 P.M.

KAY AUDITORIUM - ROGER WILLIAMS GENERAL HOSPITAL
CHALKSTONE AVENUE, PROVIDENCE, R. I.

"Prospects for the Cure of Leukemia: Chemotherapy or Immunology"

— SPEAKERS —

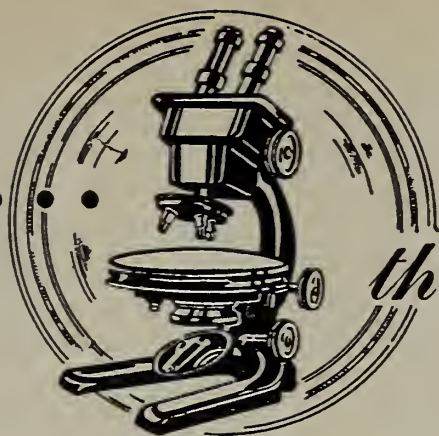
JAMES F. HOLLAND, M.D.

ASSOCIATE ATTENDING PHYSICIAN CHIEF, CLINICAL IMMUNOLOGY
SERVICE MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES
NEW YORK, NEW YORK

HERBERT F. OETTGEN, M.D.

CHIEF OF MEDICINE ROSWELL PARK MEMORIAL INSTITUTE
BUFFALO, NEW YORK

THROUGH . . .



the Microscope

"GIVING BLOOD SAVES LIVES" THEME OF NEW STAMP

Design of a postage stamp to salute blood donors and to urge increased participation in this vital program was announced recently by Postmaster General Winton M. Blount, himself a donor.

The 6-cent stamp was issued March 12 in New York City in conjunction with the International Philatelic Exhibition.

"Giving Blood Saves Lives" is the theme of the stamp.

In announcing the stamp, Mr. Blount noted that blood donations are not keeping pace with increased demands for this life-saving fluid. More sophisticated surgery — open heart, for example — claims heavily on supplies of blood and its by-products.

Only about 3 per cent of eligible American donors give blood, Mr. Blount said in asserting his belief that the postage stamp would focus attention on the problem of short supply. A French blood donors stamp is credited with trebling the amount of blood contributed there.

The horizontal stamp was designed by Howard Munce, of Westport, Connecticut, who makes his debut on a U. S. stamp. It is a poster type stamp, with "Giving" in red, "Blood" in blue, and "Saves Lives" in blue, against a lighter blue background. A drop of red blood falls beneath the first "O" in "Blood".

The denomination "6", in red, appears lower right. "United States Postage", in blue, is vertical right. Background blue and drop of blood were applied by offset; lettering was printed by Giori.

* * *

CANCER DETECTION EXAM PAYABLE UNDER CHAMPUS

Pap smears, used by physicians in the detection of cancer, are always payable as a CHAMPUS

benefit even though they are performed as part of routine physical examinations of CHAMPUS beneficiaries. Routine physical examinations such as annual-type, pre-employment or pre-camp are not authorized by law for CHAMPUS payment.

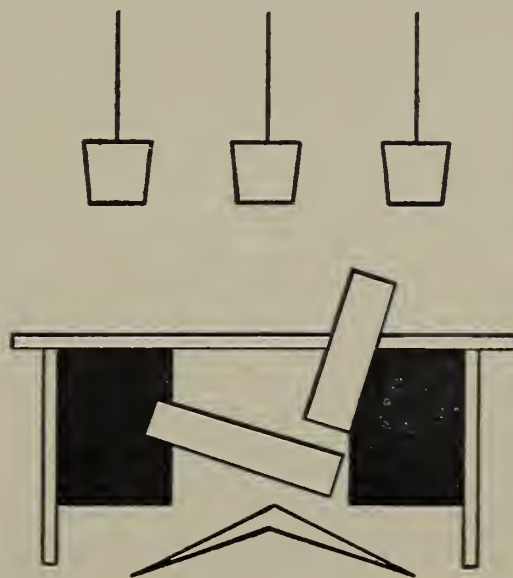
CHAMPUS officials noted, however, that any physical examination performed by a physician to diagnose a patient's complaint, whether or not specific pathology may be determined, is authorized for payment. Recommended laboratory and x-ray services in connection with these examinations are also authorized payment under CHAMPUS.

(Continued on Page 224)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

His makeup is unique by tradition.

His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthine as a tradition too.

Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthine stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic,

ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthine. Tradition does.

SEARLE

Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

Pro-Banthine®

(propantheline bromide)

the traditional ulcer treatment



Pro-Banthine 15 mg.
propantheline bromide

Pro-Banthine 15 mg.
propantheline bromide
with
Dartal 5 mg.
thiopropazate
dihydrochloride

Pro-Banthine 15 mg.
propantheline bromide
with
Phenobarbital 15 mg.
warning:
may be habit forming

Pro-Banthine P.A. 30 mg.
propantheline bromide
in time-release form

Pro-Banthine 7½ mg.
propantheline bromide
Half Strength



Pro-Banthine® (propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.

(propantheline bromide)
with

Dartal® 5 mg.

(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.

(propantheline bromide)
with

Phenobarbital 15 mg.

Warning: May be habit-forming.

For **Indications**, **Contraindications**, **Precautions**, **Side Effects** and **Dosage** see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®

prolonged acting brand of propantheline bromide
For **Indications**, **Contraindications**, **Precautions** and **Side Effects** see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

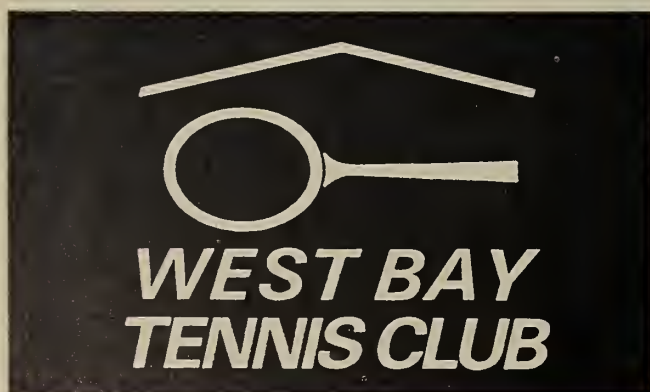
Tel: — 831-4833

Providence, Rhode Island

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

**OPEN TO ALL
PLAYING TIME STILL AVAILABLE**



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

or write Box 387

Warwick, R. I.

THROUGH THE MICROSCOPE

(Continued from Page 221)

Pap smears are part of a clinical microscopic test that is primarily used as a diagnostic tool, according to the professional staff, Office for the Civilian Health and Medical Program of the Uniformed Services.

* * *

DRUGS AND DRINKING DRIVERS

It is estimated that at any given time from 10 to 20 per cent of the nation's driving population are taking medications prescribed by physicians. This figure does not include persons using over-the-counter drugs such as antihistamines and tranquilizers (known to be hazardous to safe driving), or persons using drugs illegally.

Of 10,436 routine drinking driver investigations conducted in Santa Clara County, California, over a recent three-year period, 2,559 involved drugs as determined by the arresting officer questioning the driver or by chemical analysis. A total of 273 different drugs were encountered on 2,688 occasions. Fourteen hundred and six cases involved "problem drugs", defined as drugs unfit for self-medication and requiring a physician's prescription.

Analytical data were compiled from the cases in which blood alcohol concentrations were less than 0.15 per cent, but in which subjects exhibited overt symptoms of intoxication. Such symptoms are usually seen in intoxicated drivers. Therefore, apparent intoxication in a driver with a low blood alcohol level might be explained by drugs or the combined effect of alcohol and drugs.

With the exception of salicylate and caffeine, every positive chemical drug analysis concerned a "problem drug". Barbiturate sedatives accounted for almost half of the 24 different drugs detected, and are predominant in frequency of occurrence. Sixty per cent of all drug occurrences were in conjunction with blood alcohol levels of less than 0.05 per cent. However, only six per cent of cases in which a significant amount of drug was detected were completely negative for alcohol, indicating that most persons who drive while impaired by drugs and also drinking drivers.

("Drugs in Drinking Drivers: A Study of 2,500 Cases", in *Journal of Safety Research*, December 1969.)

* * *

SSA PREDICTS 1980 HEALTH COSTS

Social Security Administration statisticians have predicted that by 1980 physicians' services will amount to \$29 billion — 2½ times the 1968 fig-

RHODE ISLAND MEDICAL JOURNAL

ure. Hospital costs will nearly quadruple during the next ten years from the \$21 billion spent in 1968 for hospital care.

Expenditures for medical care in the U. S. reached \$57 billion in 1968 and probably rose to more than \$63 billion in 1969, according to the SSA's Office of Research and Statistics. Of the \$57 billion, approximately \$11.5 billion went for physicians' services.

* * *

MEDICAL SCHOOLS RECORD LARGEST ENROLLMENT INCREASE

The largest enrollment increase in modern times has been recorded by the nation's medical schools for the 1969-1970 academic year, and preliminary figures indicate that the total will be even greater for 1970-1971. These statistics are included in the 70th annual report on medical education, prepared under the auspices of the Council on Medical Education of the American Medical Association.

The survey revealed that 37,669 students were enrolled last year in medical schools, an increase of 1,834 over the previous academic year. The increase was achieved both by opening new schools and by expanding enrollment at many existing schools. The total number of medical schools in the United States climbed from 86 in 1960 to 103 in 1970, with the addition of two new schools in the fall of 1970. Twenty-one schools are now in the developmental stage.

The number of graduates in the class of June, 1970 reached an all-time high of 8,367, 308 more than in 1969. Medical school enrollment in the United States has been gaining steadily for ten years, and at an even more rapid rate in the past three years. The spurt in total enrollment which began in 1967 will begin to be reflected in a corresponding increase in graduates in the class of June, 1971.

As medical schools expand enrollment and new schools open, another movement is gaining rapidly in medical education — shortening the period of training. About one-third of the schools are considering or have already begun accelerated programs which permit graduation in three years rather than the traditional four years.

("Medical Education in the United States," from *News Release, American Medical Association*, November 23, 1970.)

* * *

FREEDOM OF CHOICE IN GROUP PRACTICE

In a letter to Group Health Association of America, Sidney R. Garfield, M.D., director of

Kaiser Foundation Hospitals, has asked that his position on prepaid group practice be clarified.

Remarks by Doctor Garfield before the Annual Meeting of the American Public Health Association were misunderstood because of his "unfortunate semantics," he said. In his letter, Doctor Garfield, founder of the Kaiser-Permanente plan, said: "I am a firm believer in prepaid group practice as evidenced by my long years of involvement with our type of health plan. I am also a firm believer in freedom of choice and have been deeply concerned over the trends of proposed legislation to force prepaid group practice on the medical profession.

"Morally and practically legislation should permit physicians to practice individually, or in groups, as best suits the needs of the people and the needs of those providing the service.

"Prodding physicians against their desires into group practice will result in less production and less service, rather than more. Prepaid group practice requires an unusual dedication to that form of service and that dedication cannot be dictated or legislated. Actually at this point in time, we need both types of practice and it is most important we preserve choice so that changes will be evolutionary and not forced."

. . . *AMA Newsletter*, Jan. 4, 1971.
(Continued on next page)

EAST SIDE- MEDWAY STREET

Across street Wayland Square stores parking lot. New modern prestige brick 4 office suite medical building. Designed for doctors. Parking, private entrance and exit, air conditioned, paneled, carpeting, separate waiting and examination rooms.

231-7910

E. P. ANTHONY, INC. *Druggists*

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

HOSPITAL COSTS INCREASED 217 PER CENT IN TEN YEARS

The American public paid nearly \$15 billion for hospital services in 1969 — 217 per cent more than in 1959, reports the new edition of the Source Book of Health Insurance Data.

At the same time, payments for physicians' services reached \$12 billion in 1969, up 130 per cent since 1959, and expenditures for medicines and appliances amounted to almost \$8 billion, an 88 per cent increase.

The average expense to treat a patient in a community hospital was \$69.93 per day in 1969.

Even Dozen

These are among the facts presented in this 12th annual edition of the Source Book, just published by the Health Insurance Institute.

It reports on the number of persons in the United States with private health insurance protection, amount of health insurance premiums received and benefits paid.

The Source Book also includes the latest available information on the types of voluntary insuring organizations in the country, on medical care costs, and on illness and injury during the year.

DO YOU NEED A MEDICAL SECRETARY?

Rhode Island Junior College has a number of girls graduating from their Secretarial Science program who have had training in the medical field and who are extremely interested in working as medical secretaries. If you have a need for a medical secretary please contact Mrs. Joan Swedberg, Coordinator of the Secretarial Science Department, Rhode Island Junior College.

Tel. 331-5500, Ext. 37

Age Breakdown

The book presents a breakdown of private health insurance coverage for the U. S. population by two age categories, those under 65 and those 65 and over.

Here are some Source Book highlights:

- Americans spent a total of \$42 billion in private expenditures for health care in 1969. This was 7 per cent of the public's expenditures on all personal needs.

- A total of \$14 billion in health insurance benefits was paid by private insuring organizations in the United States during 1969, nearly three times the amount paid in 1959.

- In 1969, insurance companies paid \$6 billion in benefits toward hospital, surgical and medical costs, and almost \$2 billion toward the replacement of income lost through disability. This was 2 times the benefits paid in 1959.

- Premiums written for group health insurance represented 68 per cent of the total health insurance premiums of insurance companies in 1969, compared to 61 per cent 10 years earlier.

- One out of every seven Americans was admitted to a hospital in 1969.

- On an average day there were 651,000 patients, 3.3 per 1,000 population, confined to hospitals in 1969. Annual admissions were 141 per 1,000 population.

- Between 1950 and 1969, total operating expenses of community hospitals increased from \$2 billion to almost \$17 billion, a rise of 730 per cent.

- Hospital payrolls in the United States amounted to almost \$10 billion in 1969 while in 1959 it totaled slightly over \$1 billion.

- The average length of time a patient remained in a community hospital in 1969 was 8.3 days.

- Overall, there were 325,000 physicians in the nation in 1969 with specialists outnumbering general practitioners by about three to one.

- While there was a rise from 75,313 dentists in 1950 to 91,500 in 1969, the ratio of dentists to the population declined from 50 per 100,000 persons to 46.

- The number of nurses increased by 81 per cent during the same period, from 375,000 to 680,000.

* * *

INDEPENDENT BUSINESS MEN FAVOR AGED BENEFITS

Social Security, designed to provide financial help in old age, actually penalizes some of the nation's elderly in two ways.

Social Security withholds not once, but twice,

from persons over 65 who continue to work. If a senior citizen earns more than \$140 a month, part or all of the retirement benefit he or she has qualified for is withheld. And the government continues to withhold Social Security tax from earnings.

This double withholding, and the two-time loser status of working oldsters, has drawn sympathy from the nation's independent business proprietors. Repeatedly, in the past, many have supported higher income allowances before old-age retirement benefits are reduced.

And now, in a poll conducted by the National Federation of Independent Business a majority of 58 per cent approve the call for legislation to exempt workers 65 and over from payment of the Social Security tax. Thirty-nine per cent are opposed to such an exemption, and 3 per cent render no opinion.

In Rhode Island businessmen gave this response: 54 per cent favor exemption of over-65 workers from Social Security tax withholding, 46 per cent oppose.

Under the present law, a person who has paid into Social Security since its inception in 1937, but who either chooses to, or must, work past age 65 may continue to pay the tax (or "contribution" as Social Security literature calls it) indefinitely.

Since the payroll tax — once no more than \$30 a year — has been increased progressively from a 1958 maximum of \$94.50 a year to \$405.60 this year, this tax burden has cut more and more deeply into the elderly person's income. Many elderly working people now pay considerably more in Social Security tax than in Federal income tax, the Federation notes.

If a person cannot live on the retirement benefits he has earned through the Social Security program — together with other means — he is put in the position of continuing to support the program indefinitely, as long as he works. (He would, however, begin to receive Social Security checks at age 72, then no longer being subject to forfeiture for earning more than \$140 a month.)

In contrast, no Social Security tax is paid by a retiree who is able to live on savings, investment income, Social Security benefits, etc.



"SPECIALIST" *on hundreds of cases*

Just as many doctors specialize, we have concentrated our efforts in selecting and retailing the finest wines in the world. In a sense, we are "specialists", too.

We have more than 2,000 different types of wines from which you can select. If you're uncertain as to the right wine for a particular occasion, we'd be very happy to help you, just as we have helped thousands of others enjoy the finest wines in the world. We are "specialists" on hundreds of cases of the finest vintages. Let us help you select from the largest array of wines in the area. As a matter of fact, we have a one-third greater selection than any wine shop in New York. Another "plus". Join our Vintage Guild. Membership is free.

Please see our "specialists."

No appointment necessary.



TOWN
Liquor

179 NEWPORT AVE., RUMFORD
434-4563

WASHINGTON SCENE

(Continued from Page 197)

Naval Medical Center were within normal limits. The examination team of five physicians including himself, Tkach said, found Nixon's blood pressure to be 118/82 compared to last year's reading of 120/80. He described it as a "young man's blood pressure, ideal" for the President who was only 10 days short of his 58th birthday.

Tkach's only recommendation for Nixon was that he take more time for exercise and recreation, preferably in California or Florida. The President partly heeded the advice, going to California shortly thereafter for a "working vacation."

* * *

Three major reports before the federal government urge extensive programs to combat cancer and heart disease.

A special panel of 26 expert consultants, in a report to the Senate Labor and Welfare Committee, urged a multi-billion dollar crusade against cancer in an effort to erase its "staggering" impact of death and suffering caused by the disease.

The National Advisory Cancer Council urged increased educational efforts by both governmental and private agencies to warn the public against the hazards of smoking.

The Inter-Society Commission for Heart Disease Resources recommended a program that would promote drastic changes in the nation's dietary habits, elimination of cigarette smoking and research into the causes of high blood pressure.

The latter two bodies were set up by the Department of Health, Education and Welfare. The heart disease commission is made up of more than 100 experts in cardiovascular disease, epidemiology, radiology, rehabilitation and surgery from 29 medical organizations, including the American Medical Association, The American Heart Association, the American Nurses Association, the American Hospital Association and the College of Cardiology.

Based on a four-month study, the cancer report to the senate committee included an estimate that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the President.

"The Committee is unanimously of the view that the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

The report recommended doubling cancer research spending to \$400 million in the 1972 fiscal year, and increasing it by \$100 million to \$150 million in subsequent years to a \$1 billion level in 1976.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

The National Advisory Cancer Council's fourth annual report on the state of the art in cancer research cited the more than 60,000 deaths a year in the United States from an "epidemic" of lung cancer attributed mainly to cigarette smoking. The report dealt with the chemical causes of cancer and the effects of many environmental factors, not only the "private pollution" of smoking but also the more public air pollution from industrial and commercial wastes, as causative agents in malignant disease.

(Concluded on Page 229)

HEALTH HAVENS NURSING HOME

A Participating Extended Care Facility
In Federal Medicare



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275
JCAH Accredited

WASHINGTON SCENE

(Concluded from Page 228)

As of January 2, a ban on all advertising of cigarettes on television and radio became effective under legislation approved in the Congress, and all packages of cigarettes manufactured and sold in the United States now must carry a new printed warning: "The Surgeon General has determined that cigarette smoking is dangerous to your health." This replaced the milder warning required by a 1965 law that expired in 1969 which said: "Caution: cigarette smoking may be hazardous to your health."

Although a substantial portion of this report of the Council was devoted to the problem of smoking and health, it was stated that the production of cancer by chemicals is part of a larger problem of the hazards facing man in a polluted environment. The report pointed out that the death rate from cancer continues to increase despite steady improvement in the cure rate, and suggested that this may be related largely to increased exposure of the population to cancer-causing agents in the environment.

The heart disease commission's report said the nation's cholesterol-rich diet, cigarette smoking and high blood pressure are the primary reasons for one million heart attack deaths and 600,000 heart disease deaths in the United States annually. The report cited five secondary factors: obesity, diabetes, tensions, sedentary living and heredity.

The commission urged "safe and reasonable" changes in everyone's diet to reduce saturated fats and cholesterol even though present evidence that such dietary changes would help is now "suggestive" rather than "conclusive." In an effort to obtain "conclusive" evidence, the commission's experts recommended large-scale, federally-financed scientific studies of American eating habits and their consequences in terms of heart-artery health or illness. The commission envisaged studies costing about \$80 million, requiring 10 years and involving some 60,000 persons on typically high-fat diets as subjects.

* * *

Congress appropriated for the Department of Health, Education and Welfare more than \$400 million more for the current fiscal year (1971) for its health programs, other than medicare and medicaid, than was requested by the Nixon Administration.

The appropriation approved by Congress was a compromise between House and Senate figures

and represented increases over Administration allotments with the exception of the two for the Food and Drug Administration and Comprehensive Health Planning which were the amounts requested — \$89.5 million and \$247.1 million, respectively.

The total HEW appropriation for specific health programs amounted to \$739.9 million. The National Institutes of Health appropriation included \$275.9 million for health manpower programs, \$33.7 more than asked. The mental health appropriation totalled \$379.5 million, a \$32.8 million increase. A \$196.5 million appropriation for medical facilities construction included a \$107.2 increase. There was a \$300,000 increase in the maternal and child health appropriation of \$255.6 million.

* * *

The Nixon Administration has been urged by a "Health Caucus" headed by the American Medical Association's president to give a high priority to health services for children.

The caucus comprised representatives of the AMA, the Women's Auxiliary to the AMA, and the American Dental Association at the White House Conference on Children. Dr. Walter C. Bornemeier, president of the AMA, was chairman.

Stephen Hess, chairman of the conference, said he would forward to President Nixon a letter outlining the unanimous views of the caucus. The letter was accompanied by a resolution on child health care adopted by the House of Delegates at the AMA's 1970 clinical convention in Boston, Mass. The caucus cited the resolution's five recommendations as examples of steps that should be taken to improve child health care. The recommendations:

—That relevant parent health education related to total health of the mother, leading to the seeking of prenatal care, be made available on a wide scale.

—That medical care that anticipates high risk mothers be made more readily available.

—That in each state a system of intensive care units of potential high-risk mothers and infants be developed.

—That the conference urge the expansion of the health aspects of programs for all school children.

—That all payors of health care (the insurance industry) structure their contracts to cover the newborn from the moment of birth.

✻ ✻ ✻

CHOLESTEROL ABSORPTION FOLLOWING EIGHTY PER CENT SMALL INTESTINE RESECTION IN DOGS

(Concluded from Page 210)

to exceed compensation by the system. Indeed, a fascinating finding of this experiment is that, with only 20 per cent of small bowel remaining, the rate of cholesterol absorption *decreased* drastically and the anticipated compensatory increase in cholesterol absorption did not occur.

The fact that the four puppies succumbed with malnutrition is a clear contraindication of this drastic procedure in developing dogs. However, these results support the viability of dogs with eighty per cent resections performed as a method of reducing blood cholesterol levels. They survived on normal dog food. The gastrostomies were not needed.

While massive resections or bypass of the order of eighty per cent are clearly strenuous procedures, they are not lethal in the dog. It has been shown that the total cholesterol level of normal adult dogs was depressed thirty-four per cent (Fig. 2) and the absorptive rate was diminished seventy-seven per cent (Fig 3). Electrolyte and weight indices during the postoperative course favorably compared to preoperative control measurements.

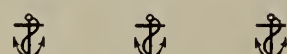
The amount and rate at which cholesterol is absorbed (and recycled) through the intestinal membrane are probably of vital importance in controlling the development and extent of atherosclerosis. This work suggests that a high order of resection can significantly depress plasma cholesterol levels.

SUMMARY

Massive small intestinal resection in dogs results in a significant reduction in the serum cholesterol. While eighty per cent resection is a drastic procedure, this study indicates that massive resection in dogs is not the high risk procedure it was once thought to be. The absolute limit for small intestinal resection, whatever the reason, may well be considerably greater than previously suggested in the literature. In addition, these experiments suggest that in patients dangerously high serum cholesterol levels (in excess of 500 mg./100 ml. of serum) associated with a family history of atherosclerosis could be significantly depressed by this operative procedure.

REFERENCES

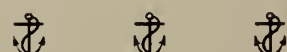
- ¹SCHOENHEIMER R, SPERRY WM: Sterol secretion and coprosterol formation. **J Biol Chem** 107:1-4, Oct 34
 - ²BYERS SO, FRIEDMAN M, GUNNING B: Observations concerning production and excretion of cholesterol in mammals. XI. The intestinal site of absorption and excretion of cholesterol. **Amer J Physiol** 175:375-379, Dec 53
 - ³BUCHWALD H: Lowering of cholesterol absorption and blood levels by ileal exclusion. **Circulation** 29:713-720, May 64
 - ⁴BUCHWALD H, VARCO RL: Partial ileal bypass for hypercholesterolemia and atherosclerosis. **Surg Gynec Obstet** 124:1231-1238, Je 67
 - ⁵SCOTT HW, et al.: Effects of bypass of the distal fourth of small intestine on experimental hypercholesterolemia and atherosclerosis in rhesus monkeys. **Surg Gynec Obstet** 125:3-12, July 67
 - ⁶ABELL LL, et al.: Simplified method for estimation of total cholesterol in serum and demonstration of its specificity. **J Biol Chem** 195:356-366, Mar 52
 - ⁷BIGGS MW, et al.: Observations on the fate of ingested cholesterol in man. **Circulation** 6:359-366, Sept 52
 - ⁸BORGSTROM B, LINDHE BA, WLODAWER P: Absorption and distribution of cholesterol-4-C¹⁴ in the rat. **Proc Soc Exp Biol** 99:365-368, Nov 58
 - ⁹DE FOURCROY A: De la substance feuilletée et cristalline contenue dans les calculs biliaires, et de la nature des concrets cystiques cristallisés. **Ann Chim** 3:242-252, 1789
 - ¹⁰BOTTCHER CJ, WOODFORD FP: Chemical changes in the arterial wall associated with atherosclerosis. **Fed Proc** 21:15-19, July-Aug 62
- Mark S. Hochberg
Vanderbilt Hall
107 Avenue Louis Pasteur
Boston, Massachusetts 02115



Scanning The Literature

BERUFSMERKMALE DER HAUT (OCCUPATION MARKS) Francesco Ronchese, M.D. *Fortschritte der Medizin* 88:1085-1088 (Oct.) 1970.

Illustrated and discussed are the tattoos on the silversmith hands, the stains of the hairdresser, the "diamond" ring of the granite cutter, the dentist callus, the interdigital sinuses of the barber from imbedded hair, the pseudo-occupation marks like hereditary palmar keratosis, palmar psoriasis, self bitings.



RECTAL OBSTRUCTION DUE TO CARCINOMA OF THE PROSTATE

(Concluded from Page 212)

- with radium. **Surg Gynec Obstet** 34:99-118, Jan 22
- ⁸FLOCKS RH: Clinical cancer of the prostate. **JAMA** 193:559-62, 16 Aug 65
- ⁹FRANKS LM: The spread of prostatic cancer. **J Path Bact** 72:603-11, Oct 56
- ¹⁰GILBERTSON VA: Cancer of the prostate gland. Results of early diagnosis and therapy undertaken for a cure of the disease.. **JAMA** 215:81-4, 4 Jan 71
- ¹¹GRAVES RC, MILITZER RE: Carcinoma of the prostate with metastases. **J Urol** 33:235-53, Mar 35
- ¹²HARTMANN H: **Travaux de chirurgie anatomoclinique**. 4.s.: voies urinaires. Paris, G. STEINHEIL, 1913 (1912). Pp 204-6: Cancer of the prostate simulating cancer of the rectum.
- ¹³JACKMAN RJ, ANDERSON JR: Proctologic manifestations of carcinoma of the prostate. **Amer J Surg** 83:491-95, Apr 52
- ¹⁴JACOBSON N: Contributions to the surgery of malignant disease of the prostate gland and of the tonsils. **Ann Surg** 33:269-98, Mar 1901
- ¹⁵KICKHAM CJE: Carcinoma of the prostate simulating primary rectal malignancy. **J Urol** 35:342-48, Mar 36
- ¹⁶KICKHAM CJE: Diagnostic pitfalls in carcinoma of the prostate. **J Urol** 45:92-101, Jan 41
- ¹⁷LAZARUS JA: Complete rectal occlusion necessitating colostomy due to carcinoma of the prostate. **Amer J Surg** 30:502-5, Dec 35
- ¹⁸MINTZ ER, SMITH GG: Autopsy findings in 100 cases of prostatic cancer. **New Eng J Med** 211:479-87, 13 Sept 34
- ¹⁹REAY ER, UTLEY WLF: Rectal manifestations of the malignant prostate. **Aust New Zeal J Surg** 24:272-78, May 55
- ²⁰RUBIN P, et al.: Cancer of the urogenital tract: Prostatic cancer. Current concepts of cancer No. 28. **JAMA** 210:1073-81, 10 Nov 69
- ²¹SCOTT R, Jr, et al.: Carcinoma of the prostate in elderly men: Incidence, growth characteristics and clinical significance. **J Urol** 101:602-7, Apr 69
- ²²WINTER CC: Prostatic carcinoma involving the rectum; the problem of differentiation from other malignant lesions. **California Med** 82:85-90, Feb 55
- ²³WINTER CC: The problem of rectal involvement by prostatic cancer. **Surg Gynec Obstet** 105:136-40, Aug 57
- ²⁴YOUNG HH: The cure of cancer of the prostate by radical perineal prostatectomy (prostate- seminal vesiculectomy): History, literature and statistics of Young's operation. **J Urol** 53:188-256, Jan 45
- ²⁵Veterans Administration Cooperative Urological Research Group: Carcinoma of the prostate: Treatment comparisons. **J Urol** 98:516-22, Oct 67



MEDICAL COLLECTIONS AT THE AMERICAN ANTIQUARIAN SOCIETY

(Concluded from Page 214)

tioned in the AAS broadside, was one aspect of his campaign. In 1810 he published his famous *Infor-*

mation Respecting the Origin, Progress, and Efficacy of the Kine Pock Inoculation (also at AAS).

Another scarce and interesting recent acquisition is *An Essay on the Subject of the Yellow Fever* by Benjamin B. Strobel (Charleston, S.C., 1840). Strobel (1803-1849) was a Charleston physician who served in the South Carolina militia during the Florida Seminole War of 1836. While in Florida he observed the effects of Yellow Fever and the *Essay* is a result. He argued that Yellow Fever was contagious and urged a rigid quarantine as an effective means of limiting the disease. An interesting feature of his book is three maps which he prepared to trace the spread of Yellow Fever epidemics in 1838 and 1839..

Danial Drake's *Systematic Treatise; Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America* (Cincinnati, 1850) is another recently acquired book at the AAS (Fig. 3.) The Author (1785-1852) of *A Systematic Treatise* was a man of outstanding ability and wide ranging interests. Trained as a physician at the University of Pennsylvania he was also a leading literary figure in Cincinnati and Kentucky. He was a founder of medical schools and periodicals and he was also a member of the American Antiquarian Society. His book is a history of disease in the Mississippi Valley. He spent years gathering the data and five years in the writing of the 878 page book. John Shaw Billings called it Drake's *magnum opus* and believed him to be "first on the list of the illustrious dead of the medical profession of the United States."

The library of the Society is open for readers on business days, from nine until five. You are most welcome to use these facilities.



Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

PROPOSED NATIONAL HEALTH INSURANCE PROGRAMS

(Concluded from Page 192)

SENATOR KENNEDY-CONGRESSWOMAN MARTHA GRIFFITHS — HEALTH SECURITY ACT — S. 3, H. R. 22

Congresswoman Martha Griffiths has joined with Senator Kennedy as a principal sponsor of the Health Security Act, the program developed by the Committee for National Health Insurance (Committee of 100). This bill is S. 3 in the Senate and H. R. 22 in the House.

The Health Security Program would provide comprehensive health coverage, including: payment of all necessary physician services, with surgery covered only if done by an appropriately qualified specialist and on proper referral; all necessary hospital services; skilled nursing home services (120 days per spell of illness); dental services for children under 15, with eligibility intended to be expanded in time to cover all persons; medicines from an established list (for inpatients and persons enrolled in group practice plans; for others only drugs for long-term or chronic illness would be covered); other supporting services.

There would be no maximum amount of benefits to be paid or days of care to be provided (except for skilled nursing homes, dental care at first, psychiatric hospitalization, and drugs).

The program would be financed from three sources: 50 per cent from general revenues, 36 per cent from employer payroll tax, 12 per cent from individual's payroll tax, and 2 per cent from self-employment payroll tax. These monies would be paid to a Health Security Trust Fund.

Pre-spending budgeting would determine the amounts which could be spent in the various regions for specific services, i. e., institutional services, physician services, dental services and the

furnishing of drugs, devices, and supporting services.

Hospitals, skilled nursing homes, and other institutional providers would operate on an approved budget procedure.

Allotments would be made to local regions for physician payment. Payment would be by salary, special stipend, capitation, fee for service, or other methods. Priority would be given to the payment of salaries, stipends and the professional services components of institutional budgets. The remainder would be allocated among the providers proportionately according to the comprehensiveness of services provided. Thus a comprehensive health service organization would receive a larger payment for each patient enrolled than would an individual physician. For those who elect to be paid on a fee for service basis, allowable fees would be established under a system of relative value scales. All physician payments would be from the Health Security Fund.

A Resources Development Fund would be established to initiate studies and projects aimed at reorganizing the delivery of health care.

The program would establish national standards for participation by providers, (both individual providers and institutions), including continuing education requirements.

The program would call for the active involvement of consumer groups in the development of health care programs and organizations. Consumer-sponsored health care organizations would be recognized under the Health Security Program.

The program would be administered by a National Health Security Board. There would also be a regional office within each of the present HEW regions. Finally, local administrators would coordinate local planning with the expenditure of Health Security funds.

According to figures prepared by the Committee for National Health Insurance, the program would have cost \$41 billion if it had been in effect in 1970. Social Security Administration estimates indicate the program would cost about \$77 billion.

AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800



ONE SENTENCE ESSAY

A doctor who pays his taxes can't be all bad.
... David Susskind

LEGISLATIVE PROPOSALS FOR NATIONAL HEALTH INSURANCE

(Concluded from Page 207)

shall add for the most part to costs. But if medicine can find cures for more cancers, or more relief for arthritis, it will not really begrudge the direct costs.

CONCLUSION

No proposal for national health care can be effective without adequate means to carry out the program. The issue is not American medicine, not the quality of American medicine. The issue is the distribution of American medicine. High quality medicine must be available for all citizens. It is also true that greater accessibility must be made available by providing the financial means for every one of our citizens to have fulfilled the right he has to proper health care.

It is to this end that the AMA offers the Medicare program. It is to this end that AMA has testified four times before Congressional appropriations committees during the last Congress seeking full funding of medical education. In this connection, this Committee knows that the present Health Professionals Educational Assistance Act is expiring. Legislation, including the Administration's proposals for development of health manpower, will be before the Congress and this Committee. In an area of such significance with respect to alleviating a health care crisis, Congress has not only a grave responsibility but also a special opportunity to set the nation on a course of achieving objectives in this critical area.

All recognize that skill and technology, without the means of spreading them across our nation to all citizens, are only academic achievements. It is to this end, also, that organized medicine supports programs for training allied health personnel. Again, the Congress must support those programs with full funding for the production of allied health personnel - with special emphasis on support for nurses.

The American Medical Association will be ready and willing to offer the Congress any possible assistance in determining proper goals and setting forth a realistic approach to the development of adequate manpower resources.

An effective total program of improved health care in the nation also depends on many other factors. It is to this end that the AMA also supports greater health education as a strong preventing ill health; supports the strengthening of

our health care delivery system and improvements in practice patterns to achieve greater productivity; supports peer review as a means of maintaining and increasing quality of care; supports development of new, and modernization of existing, health care facilities; supports a program to ease the heavy financial burden on many families for long term custodial care of aged dependents; supports medical research; and supports programs to meet special health care needs of the rural areas and the inner city.

If the elements which make up the health care delivery system are strengthened and supported - such as manpower, facilities, health education, practice pattern - and if access to them is made available to all, the goals of the nation will be achieved. As a matter of fact, any proposal for national health insurance is doomed without the strengthening of such elements. The health of the nation should not be risked in an untested, unproven program.

It should be stressed that if anyone is to hold before the public any promise of assuring to them the full quality of health care to which they are rightfully entitled, all of the foregoing elements take priority. But with equal vigor, the nation must commit its resources to the alleviation of all factors bearing so heavily against such an achievement, factors such as ill-housing, lack of sanitation, lack of health education and general education, unemployment and all of the other curses as part of poverty and economic and social disadvantage.

The AMA wishes to assure the Congress and the public that the American physician wants no less than the highest quality of health care to be available to all citizens. The fulfillment of this goal will require the joint efforts of everyone. The American Medical Association accepts its share of responsibility and welcomes every opportunity to join with all other responsible efforts to meet just such a goal.



BROWNE'S FIRST LAW

"Children will adopt the manners, morals and grammar of their least desirable playmate."

. . . HOWARD S. BROWNE, M.D., NEWPORT

AMERICAN HEALTH CARE SYSTEM REVISITED

(Concluded from Page 204)

entering medical schools each year, which is a doubling in about ten years. The AMA is working closely with the National Medical Association, the Association of American Medical Colleges, the Student AMA, and the American Hospital Association to encourage medical schools to increase the enrollment of students from minority groups and from geographic areas where physicians are in short supply. The AAMC's Journal of Medical Education reported recently that minority medical students make up about 10 per cent of the 1970-71 freshmen enrollments. The present enrollment of 12,000 includes 697 blacks and 387 students from other minorities. These numbers have more than doubled since 1968.

But to achieve a significant and continuing growth of manpower, funding is necessary for the schools and the students. The AMA has urged the government to supply this aid. Existing programs should be expanded. Yet the Health Professions Educational Assistance Act of 1963, and its extensions, which provide construction grants, training program grants, and student loans and scholarships, has not been fully funded by Congress.

The medical profession itself has, of course, tried to assist the students and the schools. The AMA's Education and Research Foundation operates a Student Loan Guarantee Fund which in the past eight years has guaranteed 43,631 loans of \$47,571,000 to enable medical students, interns and residents to continue their education. The Foundation also collects and distributes about \$1 million to medical schools each year. The Foundation wishes that it could be more. Obviously, only a re-evaluation of federal priorities will enable the nation to solve this critical problem.

Multispecialty Medical Bldg.

has room and need for gastro-enterologist, dermatologist, psychiatrist, internist, pediatrician 100,000 population. Good schools, good recreation areas. University affiliated hospital. Hopefully this will be a multispecialty group practice within the next 2-3 years.

BLACKSTONE VALLEY MEDICAL BUILDING, INC.

333 School St., Pawtucket, R. I.
722-2253

The AMA has also encouraged medical schools to experiment with curricula and to initiate accelerated programs. A number of schools have three-year programs underway, and others have announced their intention to begin accelerated programs.

ALLIED HEALTH PROFESSIONS

Manpower needs will respond more quickly in the nursing and allied health professions. A new, extended role for the nurse may be highly significant. She is well equipped by education and training to assume greater responsibilities in patient care. The AMA has taken considerable initiative in working to expand the role of the nurse. As this expansion is accomplished, the AMA expects dramatic increases in man, or rather, womanpower. These programs serve to extend the productivity of the individual physician whose numbers, even with a shortened curriculum, are difficult to increase rapidly.

The AMA also seeks to develop new health occupations to assist the physician in the delivery of care. The past two decades have seen a sharp increase in the number of people in allied health occupations, from 140,000 in 1950 to one million today. To assure that members of the allied health team meet proper standards, the AMA works with national medical specialty societies and other health profession associations to establish and maintain training programs.

Again, progress is being made. But again, this progress could be greater and our situation less critical if Congress had seen fit to provide full funding to programs for nurses' training and for allied health professions training, programs which had strong support from the medical profession.



DERMAQUIZ ANSWER

(See Page 193)

(Left) Lichen Planus (Center) Psoriasis
(Right) Primary chancre

Primary syphilis (this last illustration is borrowed from the Boston University, Department of Dermatology collection).



RHODE island MEDICAL JOURNAL

| | |
|---|-----|
| THE EPIDEMIOLOGY OF LEUKEMIA Lorrena Preble, B.A., M.A.T., and Louis A. Leone, M.D. | 255 |
| ANNUAL REPORT OF THE PRESIDENT OF RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE Arnold Porter, M.D. | 263 |
| REMARKS AT THE 32nd ANNUAL MEETING OF THE R. I. BLUE CROSS CORPORATION Arthur F. Hanley | 266 |
| EDITORIALS | 271 |
| DERMAQUIZ | 253 |
| CORPORATION REPORT OF RHODE ISLAND MEDI- CAL SOCIETY PHYSICIANS SERVICE | 269 |
| GENERAL MEETING OF THE RHODE ISLAND MEDI- CAL SOCIETY | 278 |
| NARCOTICS REGISTRATION | 243 |
| HOUSE OF DELEGATES REPORT | 239 |
| PHOTOGRAPHS OF SOCIETY'S OFFICERS 274, 276, 277 | |
| PRESIDENT'S MESSAGE | 275 |

COVER: Symbols of nation's largest non-profit, prepaid health insurance plans, Blue Cross and Blue Shield.

There have been several inquiries about the scenes on the April cover. The illustrations used on the April Cover were the Stone Tower in Newport, the First Baptist Church in Providence, Slater Mill in Pawtucket, and the Touro Synagogue of Newport, Rhode Island. The other illustrations were representations of a lighthouse and sailboat.

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, 1971.

House Of Delegates Of The Rhode Island Medical Society

Reports Adopted At House of Delegates Meeting Of January 20, 1971

REPORT OF THE SECRETARY Stephen J. Hoyer, M.D.

Since the September, 1970 meeting of the House of Delegates the Council has taken the following actions:

1. It has discussed with officers of the Rhode Island Ophthalmological Society the matter of possible legislation being presented again to the General Assembly relative to extension of the privileges of optometrists, and it has suggested actions that might be taken to educate the legislators and the public to the dangers inherent in such legislation.

2. It received a report from the Committee on Nursing relative to the award by the Society to Miss Leona F. Fidrych as Nurse of the Year.

3. It approved of the press release issued by the officers on the House's action regarding therapeutic abortion.

4. It was informed that the proposal of the AMA Council on Foods and Nutrition for lectures at Rhode Island colleges, approved by the Society, will result in lectures at Brown University and the University of Rhode Island in April.

5. It received a report on the AMA Congress on Medical Manpower by the executive secretary, and one on a symposium on National Health Insurance attended by the President and the Executive Secretary.

6. It approved a uniform membership application form to be used by the district and county societies, and it authorized the distribution of such forms to the component societies.

7. It authorized the President to confer with local physicians involved in the Tri-State Regional Medical Program, and to discuss the role of the state medical society.

8. It authorized the President to name a committee to present four nominations to the Council for consideration as nominees to the House to serve

as members of the board of directors of Physicians Service.

9. It recommended that the President meet with either the President or the Provost of Brown University to discuss the feasibility of a liaison committee between the Society and the University relative to its medical sciences programs.

10. It named Dr. Edwin F. Lovering of Pawtucket as the Society's representative on the New England Postgraduate Institute.

11. It concurred with the suggestion of the Vice President, Dr. Jeannette E. Vidal, that the Health Planning Council's committee on home medical care programs have additional physician representation, particularly from the Greater Providence area.

12. It approved of the Treasurer's request to the Rhode Island Foundation of an additional appropriation from the All Purpose Medical Fund towards the cost of completing the rare book room at the Medical Library.

13. It received from legal counsel a draft for possible legislation relating to abortion based on the action taken by the House of Delegates in September and it requested the Maternal Health committee to review the draft with legal counsel.

14. It authorized the President to name a Society member to succeed Dr. David Fish on the State Drug Addiction Control Commission. Doctor Fish has resigned from the commission.

15. It endorsed the concept of hearing deficiency testing program under the auspices of the Woman's Auxiliary.

16. It authorized the chairman of the committee on medicine and religion to attend an AMA workshop, the President and executive secretary to attend the AMA conference on socio-economics, and the President and President-elect to select delegates to an AMA regional meeting on rela-

(Continued on Page 246)

Guide his hand to quality and economy

Specify
Deltasone[®] 5 mg.
(prednisone, Upjohn)

**an economical
prednisone
that's made
a name for itself**

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001



Narcotic Registration

Information For Use In Completing Application For Registration To Handle Controlled Substances Under New Federal Law

The Bureau of Narcotics and Dangerous Drugs has issued "Instructions for Provisional Registration Under the Controlled Substances Act of 1970." Those instructions should be read carefully. This information sheet, prepared by the American Medical Association, is intended to provide assistance to physicians, but is not intended to replace the instructions issued by the BNDD.

An application for registration (Form BND-224A or BND-225B) must be filed with the Bureau of Narcotics and Dangerous Drugs by certain persons, including all physicians who prescribe, administer, dispense, engage in research with, or otherwise handle any drug coming under the Controlled Substances Act of 1970. The drugs are listed in five schedules on Pages 5 through 7 of the BNDD's "Instructions for Provisional Registration Under the Controlled Substances Act of 1970."

Applications should be sent to —

Bureau of Narcotic and Dangerous Drugs,
P.O. Box 28083
Central Station,
Washington, D.C. 20005

Form BND-224A is for those physicians who prescribe, administer and dispense. Form BND-225B is for those who conduct research with Schedule I drugs and with narcotic drugs in Schedules II through V. These forms take the place of the previous registration application form which had to be filed annually with the Internal Revenue Service.

The following information refers to specific items on Form BND-224A:

- | Item | Information |
|------|--|
| 5 | This is the new BNDD registration number, issued in lieu of the former IIRA and FDA numbers. |
| 6 | This is the date on which the applicant's <i>provisional registration</i> will expire. Copy A-2 of the application form is the <i>provisional registration certificate</i> and is to be retained by the applicant. |

If the expiration date shown in Item 6 is June 30, 1971, Copies A-1 and A-3, together with a check or money order covering the \$5.00 fee, must be mailed to the BNDD by May 15, 1971.

If the expiration date is July 31, 1971, Copies A-1 and A-3, together with a check or money order covering the \$5.00 fee, must be mailed to the BNDD by June 15, 1971.

If the expiration date is August 31, 1971 or later, Copy A-1 should be discarded and Copy A-3 mailed to the BNDD by June 15, 1971. No fee is required *at this time* from *these* applicants. The BNDD will automatically send them renewal applications, and the renewal applications must then be completed and mailed with the fee according to the schedule on Page 2 of the BNDD's Instructions.

- | | |
|----|--|
| 7 | This is the current IRS registration number of the applicant. |
| 8 | This is the current FDA registration number (if any) of the applicant. |
| 9 | The applicant must fill in his current state license or certificate number. |
| 10 | This item refers to the applicant's business activity. A physician practitioner, for example, would check "C" and write "MD" in the space after the asterisk. <i>Only one box should be checked.</i> If the applicant has more than one business activity, a separate application and fee must be submitted for each. |
| 11 | The applicant must check <i>all</i> schedules which contain drugs that he <i>is authorized to handle by state law.</i> <i>These schedules should not be confused with the classes which were indicated in the previous IRS registration forms.</i> The average physician without state license restriction will check each of the boxes. Pages 5 through 7 of BNDD's Instructions should be consulted for the names of drugs in each of the schedules. |

(Continued on Page 286)

Eff- fic- iency

Dicarbosil®

ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

OPEN TO ALL
PLAYING TIME STILL AVAILABLE



WEST BAY TENNIS CLUB

NOW OPEN

FEATURING BOLLTEX SURFACE COURTS
Centreville Road, Warwick
Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450
or write Box 387
Warwick, R. I.

For Insomnia...one capsule for the rest of the night

NOLUDAR®

(methypylon)



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methypylon.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ belladonna alkaloids — for the hyperactive bowel
- ☐ simethicone — for accompanying distension and pain due to gas
- ☐ phenobarbital — for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or uri-

nary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

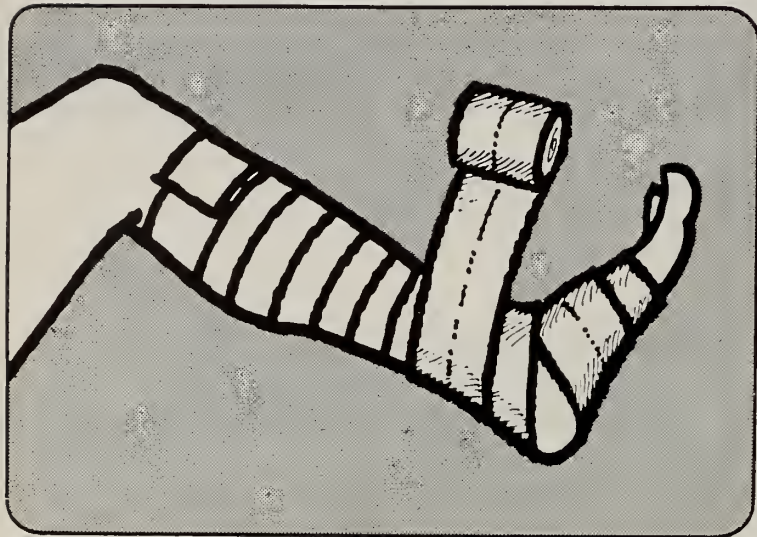
KINESED®

antispasmodic/sedative/antiflatulent

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

... EDWARD TAYLOR Ltd. ...

A Division of Glenwood Laboratories Inc.

Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage
and FLEXOPLAST elastic adhesive
bandage.

Name M.D.

Address

City

State Zip

HOUSE OF DELEGATES

(Continued From Page 239)

tionships of state medical associations with voluntary health agencies.

17. It named Drs. Thomas Perry, Harvey P. Lesselbaum, and Jorge Benavides to be the Society's delegates on the Rhode Island Interagency on Smoking.

18. It commended the President for his letter to each member of the General Assembly in which legislation in which the Society is particularly interested was cited.

19. It approved of the action of the President in issuing a press release urging physicians not to carry narcotic drugs in their automobile.

20. It heard a report of the work of the Medical Economics Council, and referred the report to the House of Delegates with the request that Dr. Stanley D. Simon discuss the issues involved.

21. It reviewed and approved the annual report of the Treasurer, subject to audit by Ward, Fisher and Company.

22. It approved of investment changes recommended by the Trust Department of the Industrial National Bank relating to the Society's invested funds.

23. It approved of a budget item of \$500 from contingency funds for use by the Woman's Auxiliary.

24. It voted to urge the board of trustees of the AMA to appoint Dr. John Butts of Worcester to the Joint Commission on the Accreditation of Hospitals.

25. It was informed by the President that Brown University is interested in having a joint liaison committee with the Society, and it authorized the President to name the Society's representatives who shall not be members of the Brown faculty, and one of whom, at least, shall be on the staff of a hospital not affiliated with Brown University's department of medical sciences.

26. It authorized the President to name a member as representative of the Society on the U.S. Pharmacopeial Convention for 1976.

27. It approved of co-sponsorship with the state health department of a lecture on April 17 by Dr. Lawrence Weed of Burlington, Vermont, on problem oriented medical records.

28. It received a memorandum from legal counsel regarding voluntary sterilization.

REPORT OF THE TRUSTEES OF THE MEDICAL LIBRARY BUILDING

The work on the rare book room has been virtually completed and we shall start moving the books into the area early in 1971. This room will house our most valuable volumes, some worth thousands of dollars, and many of which would be the envy of any medical library. The early records of the Society, existing in hand written form only,

(Continued on Page 249)

RHODE ISLAND MEDICAL JOURNAL

HOUSE OF DELEGATES

(Continued From Page 246)

letters, manuscripts, and other archival material will be kept in the special room, also. Proper temperature and humidity should keep our treasures in good condition, preserving them for future medical generations.

This room was built from funds received from the All Purpose Medical Fund, Rhode Island Foundation.

JEANNETTE E. VIDAL, M.D.
Chairman

REPORT OF THE TREASURER

John P. Grady, M.D.

1. Financial Summary for 1970

A financial summary of receipts and disbursements for the year 1970 is made a part of this report. Also included is a statement of our invested accounts as submitted by the Trust Department of the Industrial National Bank.

However, the bank recommended recently, and the Council approved, of the following investment changes: SELL our holdings in Phillips Petroleum, Sterling Drug, CIT Finance, and IBM, and BUY Weyerhaeuser, CV. PFD., Standard Oil of N.J., Security Pacific, and Xerox CV. DEB. These changes are estimated to bring us a potential additional \$400 income annually.

Our financial records will be audited by Ward, Fisher and Co., as in the past, but the data submitted in my report is complete, except for the Medical Journal account which will not be available until the end of January.

We completed the year with a cash operating reserve of \$14,777.86, and in addition we have in the general fund the sum of \$146.05 credited to the Adelson Fund, \$400.74 credited to the Library Resource Grant, \$1,246 credited to the All Purpose Medical Fund towards the expense of the Rare Book Room, and \$699.10 credited to a USPHS Grant for emergency medical care conferences.

Our invested account shows a market value of \$115,660.68, thus giving us total assets, cash and invested funds, of \$132,930.43.

BENEVOLENCE FUND . . . 1970

During 1970 the Trustees of the Rhode Island Medical Society Benevolence Fund extended financial aid to five physicians and/or their families. In addition to direct cash payments, the Trustee also provided the payment to Blue Cross and Physicians Service for insurance coverage for four beneficiaries.

(Continued on Next Page)

Hopkins

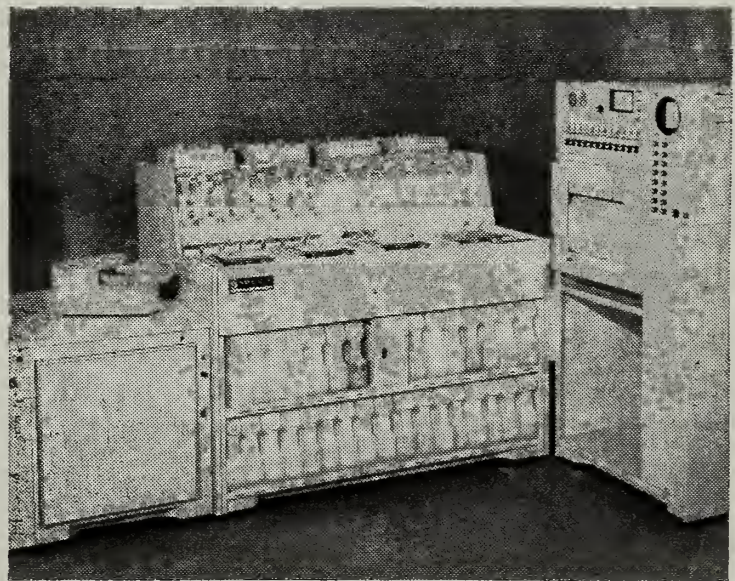
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

A financial summary of the year is presented:

CHECKING ACCOUNT

| | |
|---|------------|
| Cash balance, Industrial National Bank, Jan. 1, 1970 | \$3,666.54 |
| Cash transfer from savings account | 1,000.00 |
| Donation from Rhode Island Medical Society | 2,000.00 |

| | |
|-------------|------------|
| Total | \$6,666.54 |
|-------------|------------|

Expenses:

| | |
|--|------------|
| Payments to, and in behalf of beneficiaries | \$5,346.30 |
| Printing | 42.00 |

| | |
|-------------|------------|
| Total | \$5,388.30 |
|-------------|------------|

\$5,388.30

| | |
|--|------------|
| Cash- Balance, Industrial National Bank, Dec. 31, 1970 | \$1,278.24 |
|--|------------|

* * *

SAVINGS ACCOUNT

| | |
|---|------------|
| Cash on hand, Industrial National Bank, Jan. 1, 1970 | \$7,547.87 |
| Donations by physicians in 1970 | 1,498.00 |
| Interest on savings | 338.17 |

| | |
|-------------|------------|
| Total | \$9,384.04 |
|-------------|------------|

| | |
|---------------------------------------|------------|
| Transferred to checking account | \$1,000.00 |
|---------------------------------------|------------|

| | |
|---|------------|
| Cash Balance, Industrial National Bank, Dec. 31, 1970 | \$8,384.04 |
|---|------------|

* * *

The Trustees again express their sincere appreciation to the Society for its donation, and to the many physicians who made individual contributions, many as memorials, during the year. Assistance to our colleagues and their families in their time of need is a most worthy activity of the membership, and the Trustees welcome contributions to the Benevolence Fund at any time. Such contributions should be sent to the Executive Office.

Respectfully submitted:

ALFRED L. POTTER, M.D.

GEORGE W. WATERMAN, M.D.

DAVID FREEDMAN, M.D.

Chairman

January 11, 1971

LIBRARY COMMITTEE

This Committee meets twice a year, in April and October.

The Medical Library Assistance Grant from the federal government was discussed at the October meeting. We are using the money for microfilming, equipment, and binding. The funds from the Rhode Island Foundation were used for the construction of a rare book room. We consider these books and records a precious heritage.

Most of our time was spent in consideration of the purchase of new books. Our library is becoming

(Continued on Page 251)

HOUSE OF DELEGATES

(Continued From Page 250)

more and more a public medical library. We all feel that this is a valuable service and good public relations. Some of the books were chosen for their appeal to the layman. We also approved the purchase of books of current medical interest many of which were suggested by members of the Society. Additions were made to the James Henry Davenport Collection and were devoted mostly to medical historical subjects.

The Library runs very smoothly with no problems and this is due to the continued devoted work of Mrs. DeJong and her assistant, Miss Patrucco. The committee appreciates the fact that she carries most of the load.

Respectfully submitted:

H. G. CALDER, M.D.
Chairman

MEDICAL ASPECTS OF SPORTS COMMITTEE

The Committee on the Medical Aspect of Sports takes pleasure in reporting that a full-day meeting will be conducted on the Medical Aspects of Sports in the George Auditorium of the Rhode Island Hospital on Friday, February 19, 1971. The principal speaker of the meeting will be Fred Alman, Jr., M.D. of Atlanta, Georgia. Doctor Alman restricts his entire practice to sports medicine. He is the Orthopedic Surgeon for the Atlanta Football Team of the National Football League and the Atlanta Braves of the National Baseball League and for the public schools in the City of Atlanta. In addition to Doctor Alman, Richard Cole, Head Trainer for the University of Rhode Island, will give a demonstration on taping and wrapping of the ankle and knee.

Trainers, coaches, and school physicians of public and private schools in the State of Rhode Island will be invited. We also hope to send out fliers to all members of the Rhode Island Medical Society.

Respectfully submitted:

A. A. SAVASTANO, M.D.
Chairman

HOSPITAL-PHYSICIAN RELATIONS COMMITTEE

The Committee on Hospital-Physicians Relations has made an attempt to define the areas in hospital-physician relations where difficulties arise. The Committee has solicited from physicians problems on hospital-physician relations where the Committee could be of assistance. It was recommended to the Committee that a poll of Rhode Island hospitals be instituted regarding medical staff representatives on the Board of Trustees of each hos-

pital and if there was not, whether such representation were contemplated in the near future. The Committee forwarded questionnaires to hospitals in the state following an AMA recommendation. The tabulated results are on page 252.

Respectfully submitted:

RUSSELL P. HAGER, M.D.
Chairman

MENTAL HEALTH COMMITTEE

The Mental Health Committee has been active in three areas:

1. It has established communication with the Committee on Program and Annual Meeting in an effort of greater participation of the mental health field in this area. A special program on mental health for the coming year will be taken into consideration.

2. Preliminary review of legislation likely to come up during this session and pertaining to mental health has been undertaken.

3. The subcommittees on alcoholism and on drugs are updating in a thorough and comprehensive manner their position papers in these matters so that the R. I. Medical Society can adopt an informed position that will take into account all the up to date aspects of these complex questions.

Resolution

The Committee has overwhelmingly approved of the following resolution for consideration by the House of Delegates:

Whereas, an announcement in the Providence Sunday Journal TV Weekly of December 6, 1970 states that the National Association of Broadcasters (NAB) is expected to have several prob-

(Continued on Next Page)

PAWTUCKET MEDICAL ASSOCIATION ELECTS OFFICERS

New officers of the Pawtucket Medical Association elected Wednesday, March 24, 1971, are:

President—Paul B. Metcalf, Jr., M.D.; Vice President—Alton M. Paull, M.D.; Secretary—Juan N. Medina, M.D.; Treasurer—Louise A. Parker, M.D.

Delegates—Richard G. Bertini, M.D.; Mary Elaine Rohr, M.D.; Eugene Gaudet, M.D.; Rudolf A. Jaworski, M.D., and Earl Mara, M.D.

Councillor—Earl Mara, M.D., and Alternate Councillor—Robert E. Newhouse, M.D.

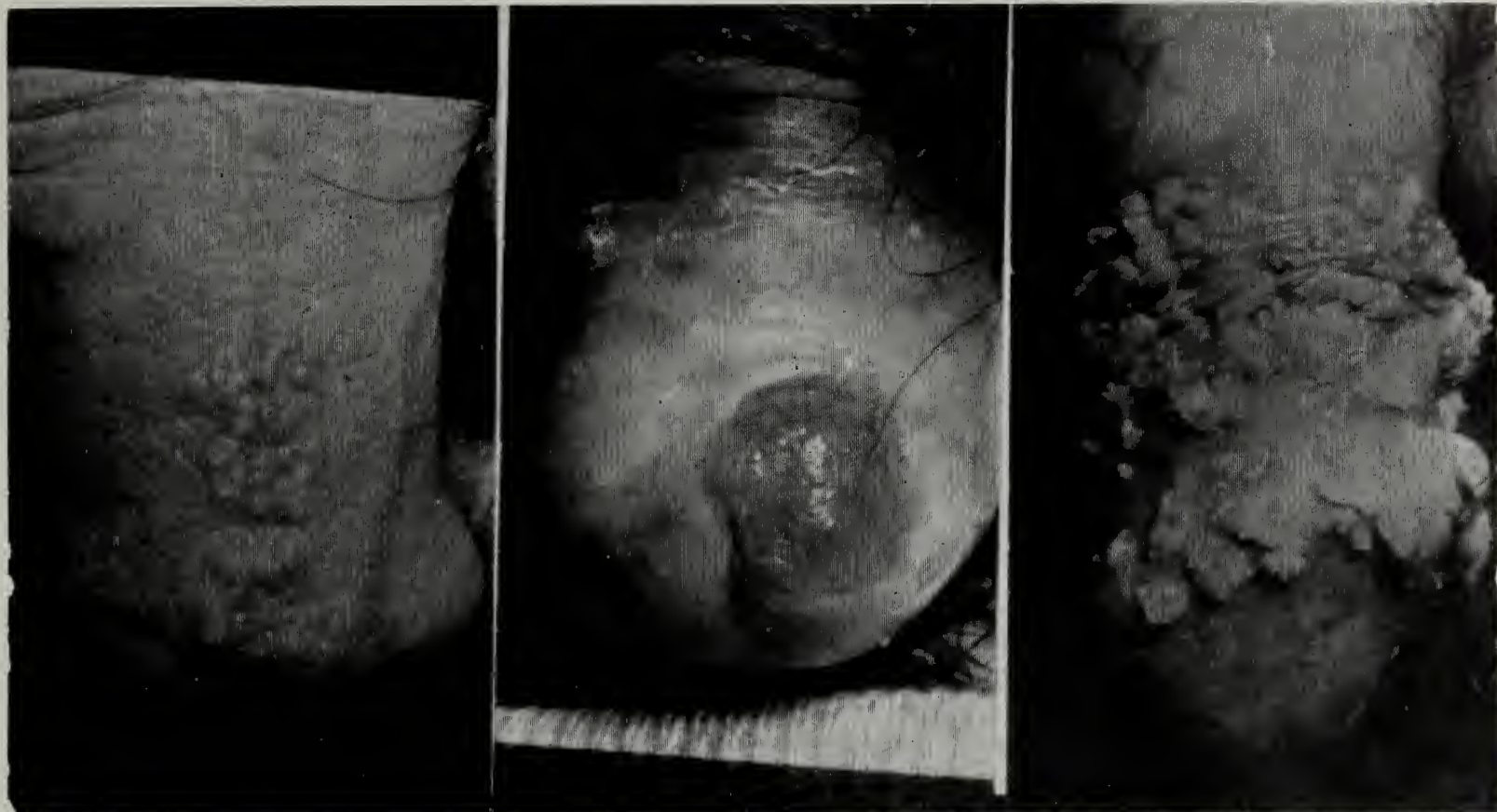
Standing Committee—Robert Fortin, M.D.; Robert E. Newhouse, M.D.; Paul Healey, M.D.; Harry Hecker, M.D., and Edmund Billings, M.D.

| Hospital | Have Representation | | | | Comment |
|-------------------------------------|------------------------------|---------------|-----------|--------------------|---|
| | No Med. Staff Representation | None Expected | Full Vote | Nominated By Staff | |
| R. I. Hospital | X | X | | | Two members of the Executive Committee of the Medical Staff attend Board Meetings on a quarterly rotating basis. |
| Roger Williams General Hospital | | | X | X | President of Medical Staff Ex-officio with vote. |
| South County Hospital | | | X | | |
| The Memorial Hospital | X | X | | X | Three medical staff members presently on Board of Trustees are there by virtue of their offices as Co-Presidents and President-Elect. |
| St. Joseph's and Our Lady of Fatima | | | | | |
| Woonsocket Hospital | X | X | | | Chief of Staff elected by Medical Staff and by virtue of position has voting privileges along with another physician nominated and elected by the Board. |
| Kent County Memorial Hospital | | | X | X | Currently reviewing situation by a special committee appointed by President of Hospital. |
| The Miriam Hospital | X | | | | Nominating Committee of Corporation. |
| Osteopathic General Hospital | | | X | | |
| Providence Lying-In Hospital | | | X | | Nominated by retiring staff member and if Nominating Committee of Board sees fit, he is presented for election by corporation members. |
| Newport Hospital | | | X | | Nominating Committee made up of members of hospital corporation which usually includes a physician member. |
| Notre Dame Hospital | | | X | | The President of the Medical Staff is a member of Board of Trustees while he is in office. |
| John E. Fogarty Hospital | | | | X | |
| Butler Hospital | X | X | X | X | President of Staff attends all meetings with voice but no vote. n |
| Bradley Hospital | X | X | | | This hospital has a closed, paid staff. Physician-in-chief and Hospital Director are the same person. He attends all meetings of Board, with voice but no vote. |
| Westerly Hospital | | | X | X | |

(Continued on Page 287)

DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.

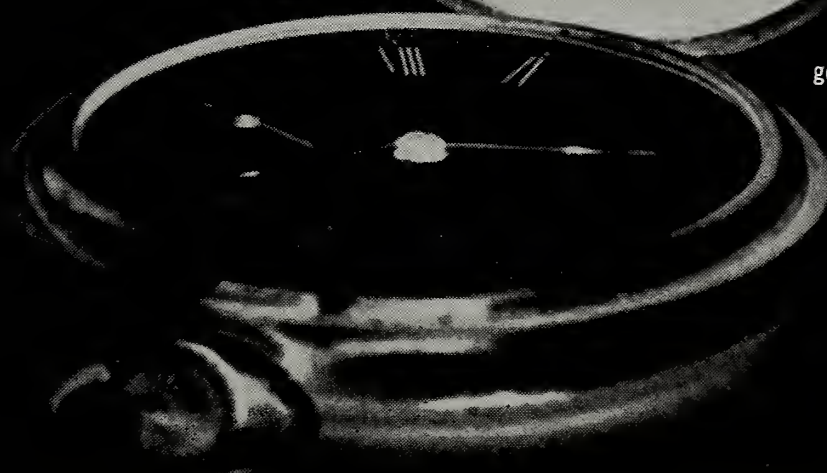


(LEFT) On the penis, a group of tiny vesicles, developed over night, drying up in a couple of weeks, eventually, periodically recurring. (CENTER) On

glans penis a scaly, reddish, indolent plaque of several years duration. (RIGHT) Cock-comb-like, pink, moist projections on inner foreskin and glans penis.

Answer on Page 286

For Insomnia...
Noludar® 300
 (methyprylon)
 one capsule
 for the rest
 of the night



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE

ROCHE LABORATORIES
 Division of Hoffmann-La Roche Inc.
 Nutley, New Jersey 07110

**Now
available for your
prescribing
needs**



Cordran[®] Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

The Epidemiology of Leukemia: Leukemia Epidemiology in North Kingstown, Rhode Island

Recent Eruption Of Cases Suggests Emerging Epidemiological Pattern

By Lorrena Preble, B.A., M.A.T. and Louis A. Leone, M.D.

The Department of Oncology at Rhode Island Hospital has conducted an intensive, epidemiologic investigation of leukemia among the residents of Rhode Island since 1964. Retrospective studies have been completed for the period 1959-1965. Lists of patients with leukemia were compiled for each year by reviewing the death certificates. The diagnosis on the death certificate was confirmed or rejected by a careful study of the medical records, and pathological materials were used to determine the presence or absence of leukemia in a questionable case. A surveillance and reporting system operating chiefly through the voluntary cooperation of pathology departments was established in 1966 for acquiring cases of leukemia from the Rhode Island hospitals and a number of out-of-state hospitals which occasionally serve residents of Rhode Island. A monthly telephone

LORRENA PREBLE, *Research Associate in Leukemia Epidemiology, Department of Oncology, Rhode Island Hospital.*

LOUIS A. LEONE, M.D., *Director, Department of Oncology, Rhode Island Hospital.*

This work is supported in part by the Lura Cook Hull Fund and the National Institutes of Health grants #CA08025-06 and #CA11897-06.

This publication is being released with the permission of the Bureau of Medicine in the Department of the Navy.

call was made to reporting cases. The twelve cases occurring in North Kingstown for the period 1966-4/1970 became known to us through the prospective reporting system.

BACKGROUND

North Kingstown, which faces Narragansett Bay on its eastern border, is located in Washington County in the southern part of Rhode Island. North Kingstown is 58 square miles in area with a total of 43.1 square miles of land. In October, 1965, the population of North Kingstown, the largest town within Washington County, was 23,013, representing an increase of 21.3 per cent since 1960. A considerable amount of the increase in population observed from 1960-1965 is probably explained by the docking of two new naval vessels. Residential growth for the same period of time was a result of both naval housing projects and private plat developments. Between 1965 and 1968 the number of naval personnel assigned to the Naval Air Station and the Davisville Construction Battalion Base in Quonset Point increased by approximately 2,500. It is expected that some of the newly assigned naval personnel and their families set up residence in North Kingstown where military housing is available. However, it is not possible to ascertain the exact degree to which the population of North Kingstown

(Continued on Next Page)

is affected in any period of time by the addition of naval personnel. The non-white population in 1960 was less than five per cent.

Naval facilities associated with the Naval Air Station and the Davisville Construction Battalion Base in Quonset Point cover about four square miles. In 1965, approximately 30-40 per cent of the population of North Kingstown was comprised of naval personnel associated with this military nucleus. A majority of the town's working population as well as many nonresidents are employed at these two naval establishments. Private business and industry (manufacturing) hire most of the remaining residents. As of November, 1965, there were 14 plants in North Kingstown, manufacturing machine tools, textiles, primary metals, boat building, chemicals, plastics, and jewelry. North Kingstown ranks high among the rapidly developing communities in Rhode Island^{1, 2, 3}.

Westerly Hospital, one of two in Washington County, located near the southeastern border of Connecticut is too distant to be of service to the North Kingstown residents. South County Memorial Hospital in South Kingstown is a small hospital used by some of the residents of North Kingstown. Many residents are referred to Kent County Memorial Hospital in Warwick or to Rhode Island Hospital in Providence, and occasionally patients are referred to hospitals in Boston. Since July, 1968, naval personnel have been cared for at the Naval Hospital located at the Naval Air Station. Naval personnel with serious hematological problems may also be referred to Kent County Memorial Hospital, Rhode Island Hospital, or the Naval Hospitals in Newport or Chelsea.

METHODS

Information concerning the 12 recent cases of leukemia (1966-4/1970) in North Kingstown was obtained by reviewing the medical records and by

interviewing either the patients (Case 7 and Case 14) or in most cases an immediate member or members of the patient's family. Samples of blood were obtained from 10 of the 12 cases for possible virologic studies in the future. Small samples of blood were also donated by at least one member of the immediate family in 7 cases; usually this included both parents and siblings. Data from the retrospective study indicated the existence of only two other cases (one acute, 1960; one chronic, 1961) in the previous seven years studied (1959 through 1965) in the town of North Kingstown. In all 14 cases a bone marrow smear confirmed the presence of leukemia. Autopsies on 4 of the known inactive cases (Cases 1, 4, 5, and 9) further documented the original diagnoses.

INCIDENCE

During the 11 year, 4 month period extending from January, 1959, through April, 1970, 14 cases of leukemia were discovered among the residents of North Kingstown. Although no more than 3 cases of leukemia occurred in any one year, the crude rates observed in North Kingstown and Rhode Island for 1966, 1968, and 1969 have been obtained by grouping the 12 cases since 1966 into sets of 4 within 3 different intervals of time, lasting 12 months or less (4/66-2/67, 12/67-11/68, 3/69-3/70. In all 3 leukemia intervals the rate of cases observed in North Kingstown is 2.5 times the rate expected if the calculations are based on the 1965 population of North Kingstown with application of the U. S. mortality rate, 1960, for leukemia of all types at all ages (7.1/100,000). The crude rate observed in North Kingstown is also slightly more than twice the rate observed in Rhode Island, using the 1965 population of Rhode Island.

A comparison of observed and expected incidence of leukemia in North Kingstown, age adjusted, for the years 1965-1969 based on Poisson distribution revealed a highly significant p value

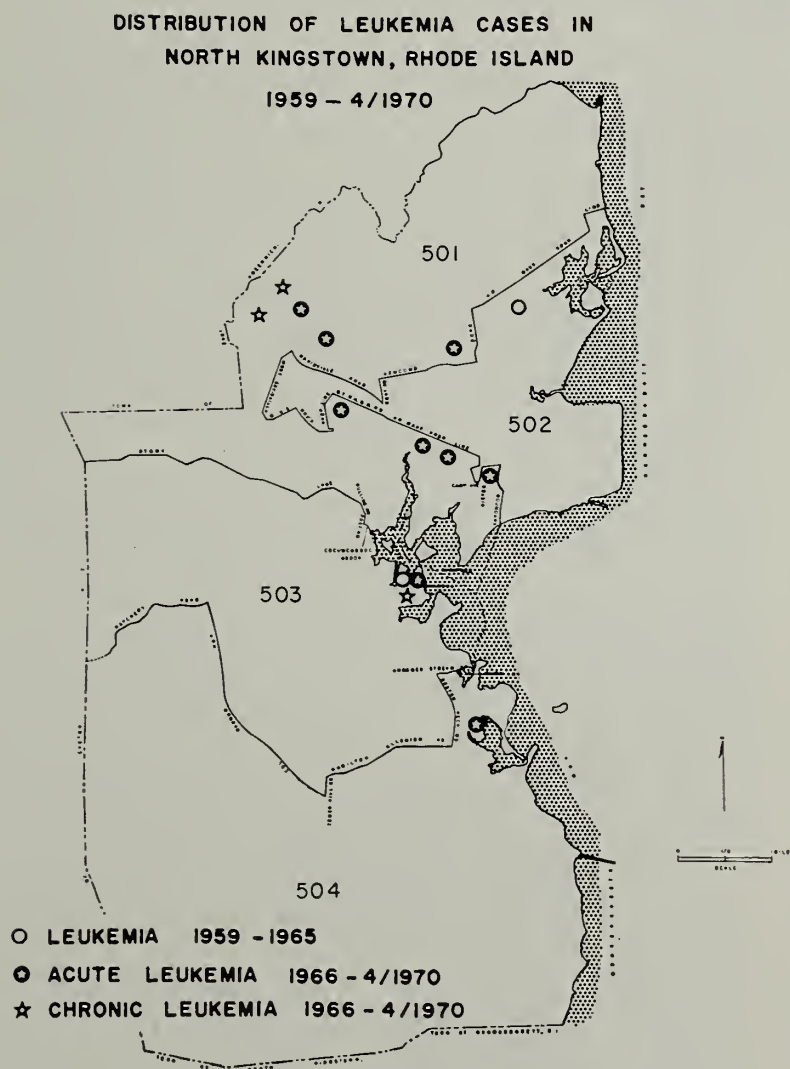
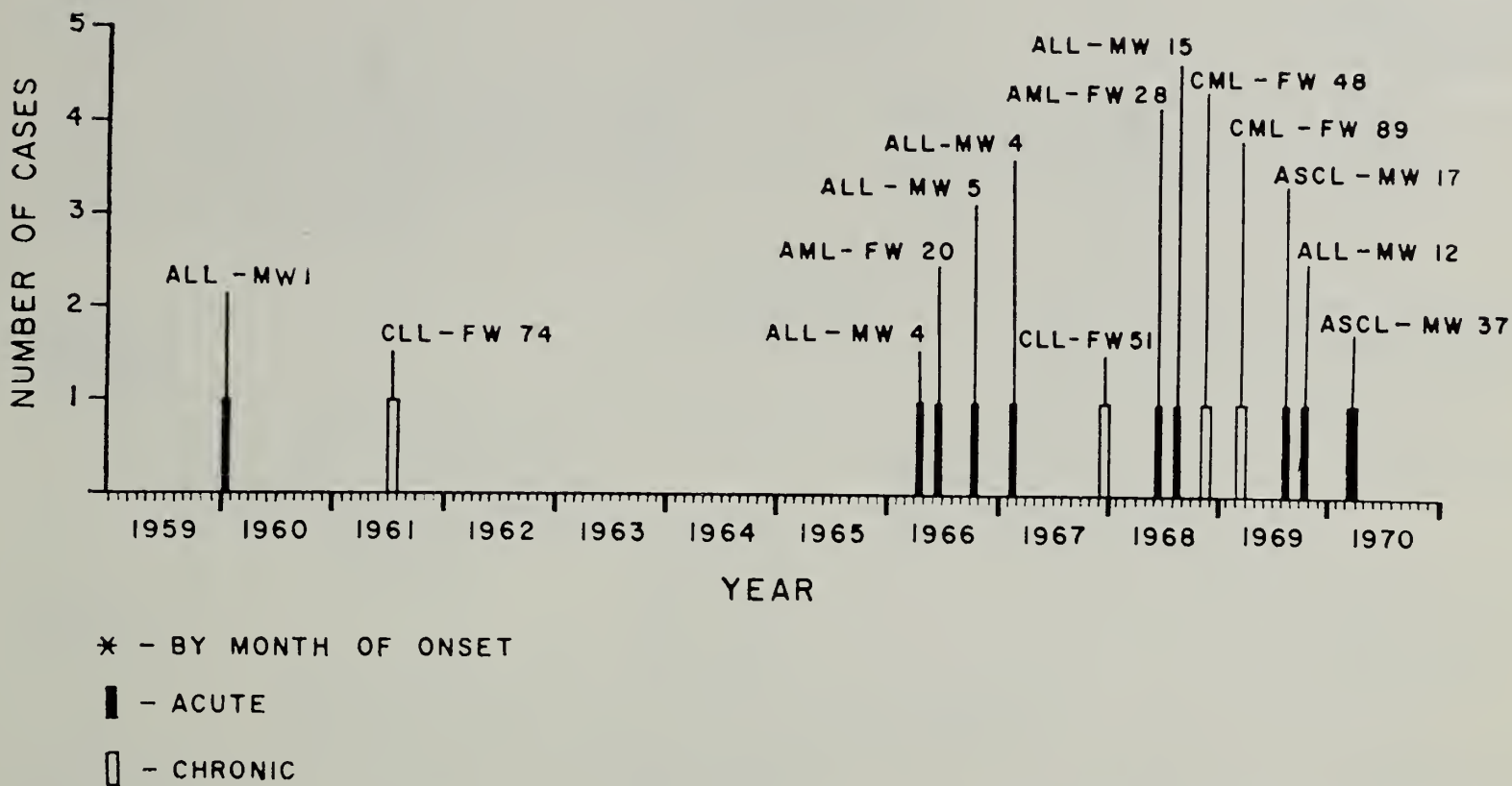
TABLE I
COMPARISON OF OBSERVED AND EXPECTED*INCIDENCE OF LEUKEMIA AMONG
RESIDENTS OF NORTH KINGSTOWN, RHODE ISLAND 1959-1969 BY AGE

| Cases | observed | 1965-1969 expected | p** | observed | 1959-1969 expected | p |
|---------------|----------|-----------------------|------|----------|-----------------------|-----|
| AGE GROUPS | | | | | | |
| 0-44 | 8 | 3.3 | 0.02 | 9 | 7.3 | 0.3 |
| 45+ | 3 | 3.8 | 0.73 | 4 | 8.4 | 1.0 |
| Total | 11 | 7.1 | 0.1 | 13 | 15.7 | 0.8 |

*Based on 1965 population data and 1964 incidence rates for leukemia in Connecticut (Connecticut State Tumor Registry), adjusted for age (10 year age groups)
**Based on Poisson distribution

Figure 1

LEUKEMIA IN NORTH KINGSTON, RHODE ISLAND 1959 - 4/1970 *



(.02) for people under age 44. Although almost 60 per cent of the population of North Kingstown is age 24 or less, the p value for the 7 cases under age 24 (eliminating Case 8, age 28) is also highly significant (.01). Over twice the number of cases was observed (8) than was expected (3.3) in young expected (3.8) among individuals over 44 was in the 10 year comparison (1959-1969) is age 24 or less, the p value for the 7 cases under age 24 (eliminating Case #8, age 28) is highly significant (.01). Over twice the number of cases was observed (8) than was expected (3.3) in young people, whereas the amount observed (3) and expected (3.8) among individuals over age 44 was about the same. The lack of significant p values in the 10 year comparison (1959-1969) of observed and expected incidences in North Kingstown can be attributed to the occurrence of only 2 cases of leukemia from 1959-1965 as compared to the 11 cases recorded from 1966-1969. This increase in the number of cases since 1966 reflect, to a large degree, improved methods of case findings which were initiated in 1966. See Table 1.

Six of the 9 cases of acute leukemia since 1966 occurred in males under age 18; one case was age 37. Two were stem cell leukemia; 5 were lymphoblastic in type. The other 2 cases of acute leukemia occurred in females under 30 years of age and

(Continued on Next Page)

TABLE II

| | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 |
|---|---|--------------|--|---|--|
| Age, at Onset, Race, Sex Diagnosis | 1 WM ALL | 74 WF CLL | 4 WM ALL | 20 WF AML | 5 WM ALL |
| Date of Onset | 1/60 | 7/61 | 4/66 | 6/66 | 10/66 |
| Date of Diagnosis | 2/12/60 | 8/31/61 | 5/31/66 | 8/2/66 | 10/22/66 10/23/66 |
| Date of Death | 2/18/60 | 8/24/64 | | 1/13/67 | |
| Length of Resi- dence at Onset | ? | ? | 17 mo. | 6 mo. | 7 mo. |
| Length and Site of Residence Before Onset | ? | ? | Cranston, R.I. 3 yrs. | Minnesota | Military housing North Kings- town, R.I., same street different house; 6 mo. |
| Family History | | | congenital heart defect, sib and great uncle; cancer 2 great aunts, 1 great uncle | uncle and cousin died of leukemia | |
| Miscellaneous | Navy onset of leukemia seems almost parallel with date of small pox vaccination | ? Navy | Navy children attended ABC Kindergarten Siege of ? rubella and chicken pox in ABC Kinder- garten just prior to onset of leukemia in Case 3 | Navy | Navy child around corner attended ABC Kindergarten |

were myeloblastic in type. The polarization toward the male sex reflects the known sex ratio in North Kingstown. In 1965 approximately 60 per cent (58.4 per cent) of the town's population was male, whereas in Rhode Island the male population of 48.8 per cent was closer to the expected figure.

The 3 cases of chronic leukemia occurred in females ages 48-89; 2 were chronic myelogenous leukemia and 1 was chronic lymphocytic leukemia. In 1960 acute lymphocytic leukemia was diagnosed in a 1 year old male who resided in a Navy Trailer Park located in Quonset Point. A case of chronic lymphocytic leukemia was discovered in a 74 year old female in August, 1961. All 14 cases were Caucasians. Eight of the 14 cases were among naval personnel and were acute leukemia. The individual characteristics for each case are listed in Table 2. (See Figure 1 and Figure 2.)

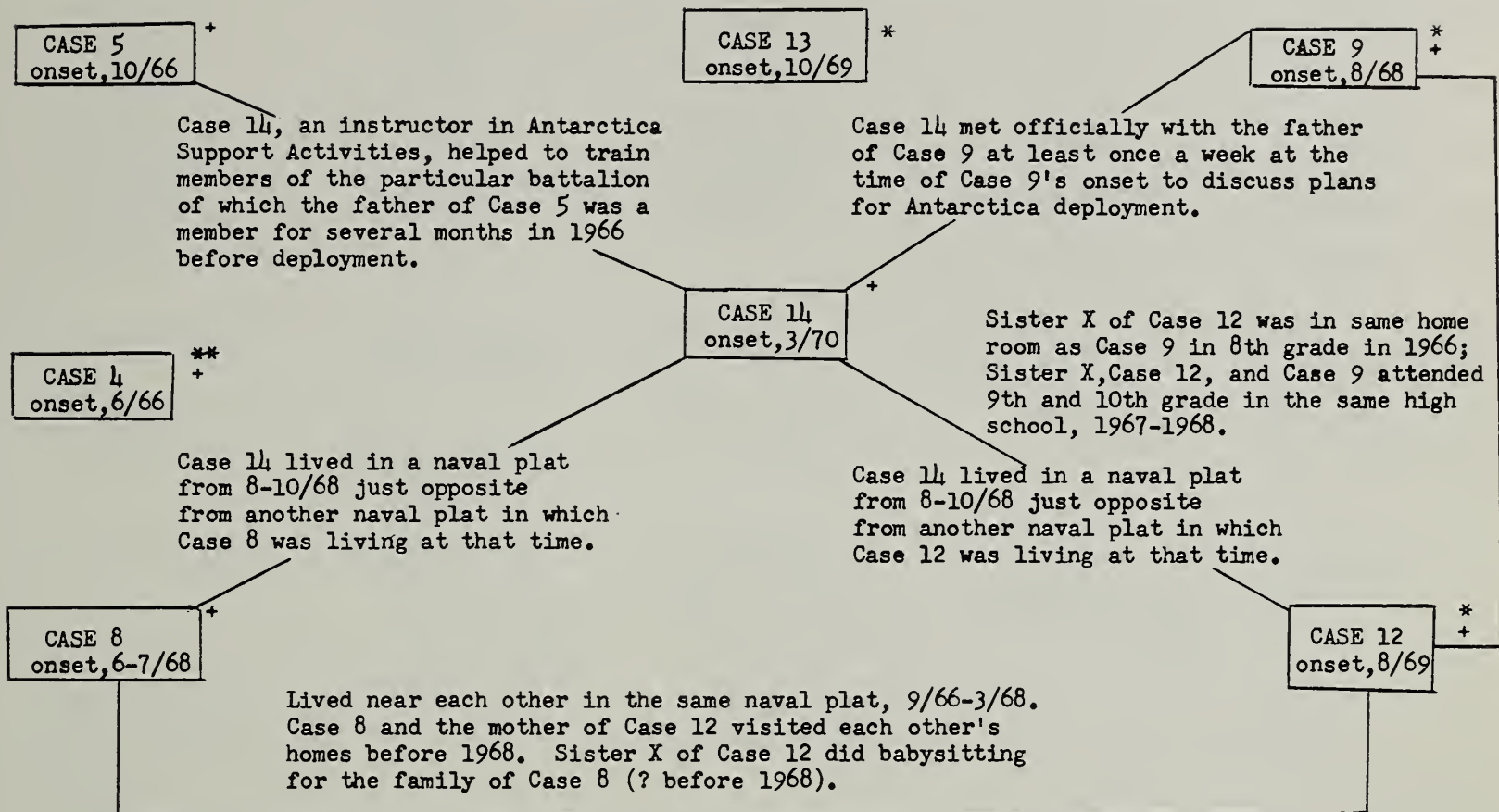
Because of the location of the military complex comprising Quonset Point, North Kingstown is a

community composed predominantly of young, male inhabitants. Various kinds of associations were discovered in the naval and social activities among 5 of the 7 Navy cases occurring since 1966. Consequently the recent eruption of 9 cases of acute leukemia confined mostly among naval personnel further enhances the statistical probability of an unusual emerging epidemiologic pattern related to the naval population. In addition, inasmuch as acute leukemia most commonly occurs among older people, the concentration of a statistically significant incidence of acute leukemia in young people in a predominantly young community seems all the more remarkable. (See Figure 3.)

Prior to onset 5 of the 8 cases of acute leukemia occurring from 1965-1969 had lived in North Kingstown for more than 1 year including 4 of the 6 Navy cases; one Navy case had lived in North Kingstown approximately 6 months; and 2 other cases including 1 Navy case had lived in North

FIGURE 3

ASSOCIATIONS AMONG CASES OF ACUTE LEUKEMIA IN THE NAVY, 1966-4/1970



* Catholics: Patients and families regularly attend chapels at the Naval Air Station.

** Catholic

+ Patient or member of family assigned to Davisville.

Kingstown approximately 3 months. No common denominator could be demonstrated between the 2 Navy cases (Case 4 and 13) with a history of residence under 7 months in North Kingstown and the other 5 Navy cases occurring since 1966. Relationships were shown, however, among the 4 Navy cases with residences greater than 1 year in North Kingstown and Case 14. Although Case 14, onset in 3/70, had lived in North Kingstown only 3 months prior to onset, he had resided in North Kingstown a total of at least 14 months on 3 separate occasions since 1965.

It is of interest that the only 2 civilian cases of acute leukemia since 1966 were indirectly associated with each other via at least 1 other child, Child X. Child X and Case 6 were cared for by the same babysitter at the same time and place just prior to and at the same time that Child X was attending a kindergarten conducted by the mother of Case 3. (See Figure 4 and discussion of Case 6.)

The relationship between congenital malformations and leukemia was explored because of previous studies^{4, 5} which suggested an epidemiologic association between the occurrence of childhood

leukemia and congenital malformations. However, a preliminary investigation of congenital malformations in North Kingstown over an 11 year period failed to yield any conclusive, statistical data.

UNUSUAL AND EPIDEMIOLOGIC FINDINGS

Case 3, age 4, male. In August, 1964, the mother of this patient, a registered nurse, established the ABC Kindergarten Day Camp beside a small cove of Narragansett Bay in North Kingstown. This camp was unique in contrast to the other two private day camps in North Kingstown in that it operated eight hours a day, 12 months a year instead of half day sessions for 10 months. The patient spent a considerable amount of time with his mother, who operated the kindergarten in an adjacent section of their home. Children were brought by their parents or by bus from all sections of North Kingstown and several surrounding towns. At least 90 children attended the ABC Kindergarten at various intervals before it ceased operation shortly after the diagnosis of leukemia in this patient.

Several months prior to the onset of leukemia

(Continued on Next Page)

TABLE II

| | Case 6 | Case 7 | Case 8 | Case 9 |
|---|--|--|--|--|
| Age, at Onset, Race, Sex | 4 WM | 51 WF | 28 WF | 15 WM |
| Diagnosis | ALL | CLL | AML | ALL |
| Date of Onset | 2/67 | 3/67-9/68 | 6-7/68 | 8/68 |
| Date of Diagnosis | 3/23/67 | 1/16/69 | 8/9/68 | 9/16/68 |
| Date of Death | 12/25/67 | | | 11/6/69 |
| Length of Resi- dence at Onset | 3 mo. | 4+ years | 2 years, 5 mo. Military housing | 23 months |
| Length and Site of Residence Before Onset | South Kings- town, R.I., 3 yrs. | Warwick, Rhode Island 20 plus years | North Kingstown Civilian housing 8-9 months | Keyport, Washington 2 years |
| Family History | 2 great grand- parents thought to have died of cancer | sister with cancer of breast and in- testine; one mater- nal aunt died of cancer; at least 3 sisters died in infancy, unknown cause | maternal aunt, can- cer of stomach; maternal grand- father died of cancer of prostate | |
| Miscellaneous | In contact with some children attending the ABC Kindergarten via a mutual babysitter | Herpes zooster in- fection 1/67-3/67; has been using Triavil, tranquil- izer known to in- duce certain blood dyscrasias. | 6/66, squamous cell carcinoma discov- ered in Case 8 Residing in R.I. at time of onset in Cases 3, 4, 5, 6 and 7 Navy | Arrived in R.I. after onset in Cases 3 and 4 and about the time of onset in Case 5 Navy |

in this patient his mother noticed an outbreak of one and possibly two viral incidents in her kindergarten. In the period 11/65-2/66 a disease which she thought was rubella occurred among one-sixth (4-5) of the kindergarten children including her son. This ailment was characterized by a low grade fever, indefinite bone pains, and a rash. Concomitant with the "rubella" there was a seige of chicken pox among approximately one-half of the kindergarten children (15).

This patient's younger male sib has a congenital ventricular defect. An anencephalic child was born in the family of the patient's only paternal uncle. The only other immediate relative of the young unmarried maternal uncle. However, further investigation of family history revealed that recently a maternal great uncle died of adrenocortical carcinoma and two great maternal aunts died of carcinoma of the colon and plasma cell

myeloma, respectively. Also, a maternal great uncle died in his forties of a congenitally deformed heart and vascular system.

Case 4, age 20, female. This patient lived in Wickford in an apartment building located near the area zoned for housing naval personnel. Upon return of her husband from Vietnam, this patient returned to her home in Minnesota where she was admitted to the University of Minnesota Hospitals on August 19, 1966.

Six months prior to establishing residence in Wickford this patient had been exposed as a hairdresser to dyes and hair sprays. More recently she had been exposed to Raid® Insecticide. Family history indicates that the patient had had an uncle and a cousin who died of leukemia. Her brother also has a blood disorder.

Case 5, age 5, male. This patient lived in Kiefer Park since March, 1966. This is an area zoned for

TABLE II

| Case 10 | Case 11 | Case 12 | Case 13 | Case 14 |
|--|----------------------------|---|--|---|
| 48 WF | 89 WF | 17 WM | 12 WM | 37 WM |
| CML | CML | A Stem Cell | ALL | A Stem Cell |
| 11/68 | 2-4/69 | 8/69 | 10/69 | 3/70 |
| 11/6/69 | 10/24/69 | 10/17/69 | 11/11/69 | 4/5/70 |
| | 3/13/70 | | | 6/18/70 |
| 4 yrs. | 12+ years | 3+ years Military housing | 2+ months Military housing | 2 months East Greenwich, R.I., 2 mo. from 11/69-1/70, Xmas 1969 in Georgia |
| North Kingstown all her life | No. Kingstown 20+ years | North Kingstown 1 mo., Georgia, 1+ years | Charlestown, North Carolina, 21 months | 10/68-11/69 naval plat, North Kingstown, 8-10/68 |
| Maternal aunt said to have died of stomach cancer | | | Monterey, California 22 months | Washington and Georgia 11/66-6/68 |
| Herpes Zoster 1966 | | Tolvene exposure | paternal great uncle died of some form of metastatic cancer | North Kingstown, 3/66-11/66, Antarctica, 2/66-10/65 |
| | | Navy Neighbors with Case 8 in naval plat 1½ yrs., Case 8 and mother of Case 12 socialized, Sister X did baby- sitting for family of Case 8, Sister X, Case 12 and Case 9 attended same public schools | Navy | Navy Mother was age 14 at his conception Patient had ? contact with radioactive materials 1962-1968 |

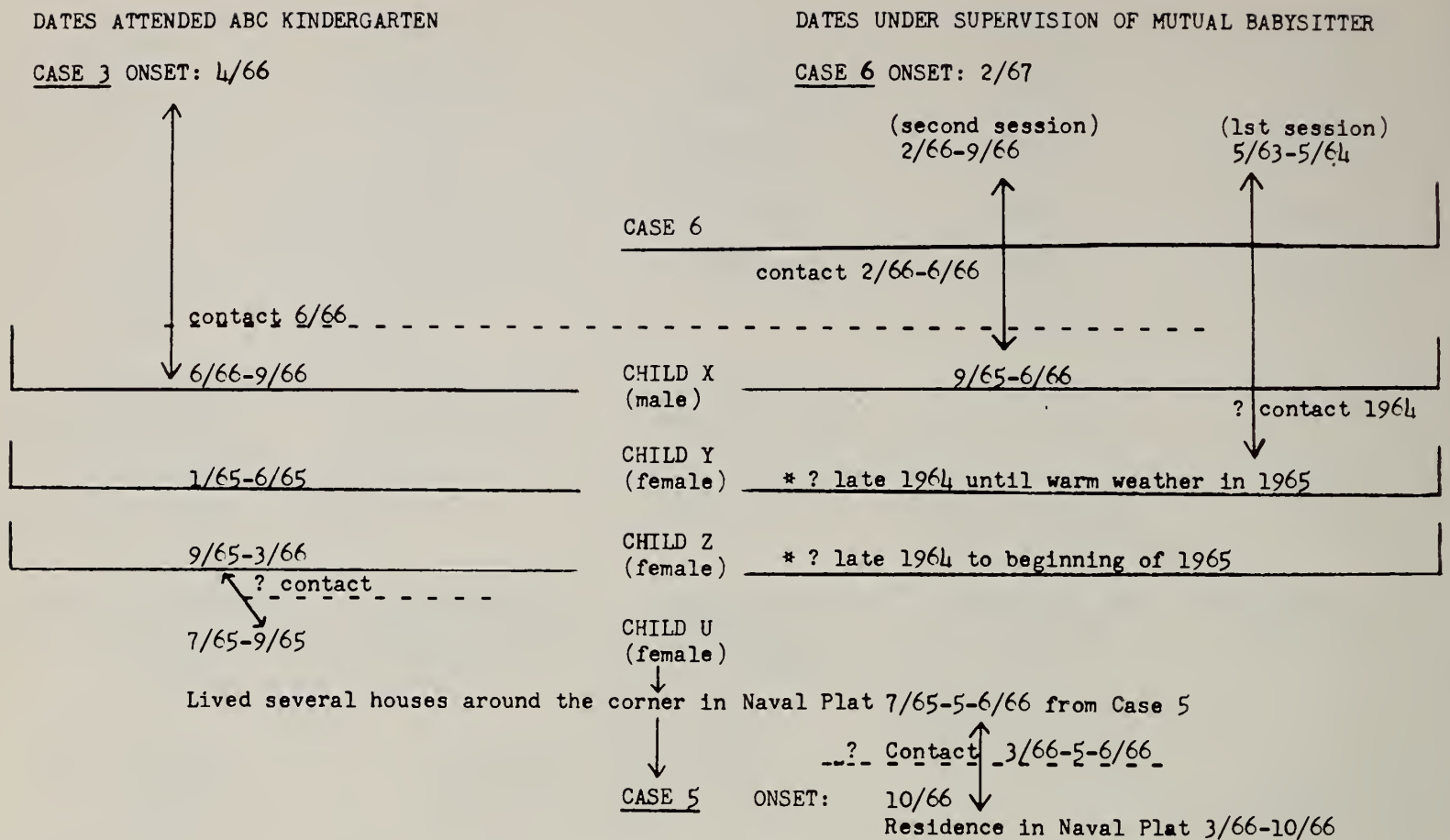
housing naval personnel associated with the Naval Air Station. Child U who lived several houses around the corner (7/65-5-6/66) from this patient attended the ABC Kindergarten in July and August of 1965. In September, 1965, Child U began first grade in the elementary school near Kiefer Park. The patient's sister attended first grade at this same school in the following year, 1966-1967. Although, this patient was geographically very close to Child U a few months (3/66-5-6/66) prior to his onset in October, 1966, no direct contact between the two has been established.

Case 6. (See Figure 4.) This patient was cared for at two different intervals of time by a baby-

sitter, Mrs. I., who supervised children in her home in South Kingstown. In both instances the residence of the patient was in South Kingstown also. The mother of this patient recognized the names of two (Child X and Y) of the three children (Child X, Y, and Z) who were cared for by Mrs. I. and who were known to attend the ABC Kindergarten. This patient was in contact at Mrs. I's with at least one child (Child X) who was attending the ABC Kindergarten at the same time. The two other children (Child Y and Z) attended the ABC Kindergarten at earlier intervals from Child X. In the first session with the babysitter

(Continued on Next Page)

FIGURE 4



*Babysitter did not keep written records

(5/63-5/64) this patient probably had contact with Child Y. Mrs. I. did not keep attendance records, but she thought that Child Y was with her from some time in "late 1964 until the warm weather began in 1965". Contact at the babysitter's, if any, with this patient would have been in 1964. Child Y ceased attending the ABC Kindergarten approximately 10 months (6/65) prior to the onset of leukemia in patient three (4/66). From the dates given Child X seems to have left Mrs. I's and begun attending the ABC Kindergarten at the same time (6/66). However, the mother of Case 3 distinctly remembered that Child X alternated between her day camp and the babysitter's for a short time after he was permanently enrolled in the kindergarten in 6/66. Child X would have been in company with patient three just shortly after his onset in 4/66 and about 10 months prior to the onset of leukemia in patient six (2/67). The name of Child Z was not recognized by the mother of this patient. Child Z attended the ABC Kindergarten at a later time than Child Y and remained in attendance until one month (3/66) before the onset of leukemia in Case 3. Child U, who lived near patient five, may have attended the ABC Kindergarten with Child Z for a brief period in 9/65.

The residence of this patient several months

prior to his onset of leukemia in North Kingstown was located along the Saugatucket River in South Kingstown. Untreated sewage from the town of North Kingstown as well as direct dyes and bleaching wastes from a dyeing corporation located about one mile from this patient's home are discharged into this river. The patient had close physical contact (licking, kissing) from the period 5/66-11/66 with two dogs known to have distemper. These dogs were also known to drink from the Saugatucket River.

In 2/67 this patient and one of his sibs became ill with a "virus infection". The mother of this patient noticed that many of the children in their new neighborhood were ill at that time. Leukemia was diagnosed in this patient in 3/67. It is thought that two great grandparents died of cancer.

Case 7, age 51, female. This patient has lived in the section of North Kingstown known as Davisville for at least four years. Davisville is located on civilian property a few miles from the Davisville Construction Battalion Unit. The patient is not associated with the Navy.

In the early part of 1967 (1/67-3/67) this patient developed severe herpes zoster. Medication prescribed for treatment included Triavil®,

(Continued on Page 280)

Annual Report Of The President Of Rhode Island Medical Society Physicians Service

Plan Ranks High In Cost Control, Experimentation In Methods Of Delivery, And Administrative Performance

By Arnold Porter, M.D.

In the past I have used this opportunity to summarize Blue Shield activities for the preceding year, and then to focus on some major issue facing the health care system as it affects Blue Shield and physicians in our State. Rather than discussing any major new challenge facing Blue Shield, I felt that my remarks might more profitably focus on where we stand right now, evaluating Blue Shield's readiness to cope with the immediate problems and pressures facing physicians and the health care system.

There has been so much talk about what is wrong with the health care system, that I think we are all reasonably familiar with the kinds of changes that must be made — that are, in fact, in the process of being made. It is becoming clear that the business of operating a Blue Shield Plan is almost a totally new concept compared to just a few years ago. Without belaboring the obvious, I want to identify three areas of critical new interest to Blue Shield and physicians, and comment on our ability to cope with each of these pressure points.

First, we are seeing unprecedented emphasis to-

ARNOLD PORTER, M.D., *President, R. I. Medical Society Physicians Service.*

Annual Report delivered at the 22nd annual meeting of the Corporation, at Providence, R. I., March 3, 1971.

day on the so-called problem of rising physicians' fees, primarily stemming from publicity generated by Congressional hearings on cost problems under Medicare and Medicaid.

Second, there is widespread public interest in proposals for Health Maintenance Organizations, Professional Services Review Organization's (PSRO's) prepaid group practice, wider coverage of ambulatory benefits, and other ideas that might keep patients out of costly hospital beds.

Third, there is a less visible but equally real pressure on Blue Shield to improve delivery of present benefits and on its ability to measure administrative excellence in terms of nationally uniform standards. These pressures are coming not only from government, but also from our national organization in response to large, national employers who are demanding increased accountability for their ever-growing health care investment.

All of these pressures are compounded and intensified by the rapidly approaching debate on national health insurance. Expert opinion is virtually unanimous that national health insurance will be one of the key issues of the 1972 presidential election.

In this kind of environment, then, it is very appropriate that we take a look at our Blue Shield Plan. It may well be that if we are doing the right

(Continued on Next Page)

kind of job in these key performance areas — that is, in control of cost and utilization, experimentation with alternative delivery systems, and continued improvement in delivery of existing benefits — we will be assured of a much more viable role in the future.

PHYSICIAN'S FEES

Looking specifically at each of these areas, then, I would comment first on the subject of physicians' charges, and in this area we can safely say that Rhode Island has an excellent record, thanks to the cooperation of the physicians of this State.

I don't think it's any secret by now that a number of large Blue Shield Plans around the country are in very serious financial difficulty, primarily because of the impact of sharply increasing costs under their Usual and Customary benefit programs.

We have had our Plan 100 Usual and Customary program in effect for almost two years now; we have enrolled over 100,000 persons under membership rates that were set two years ago, and, significantly, we are still paying claims to physicians under usual and customary charge profiles that were established in October of 1968, almost two and a half years ago. We have some requests for profile changes, and we are in the process of analyzing their impact on our present Plan 100 membership rates. Nevertheless, the fact remains that physicians in Rhode Island are to be commended for their restraint in charging practices during a time of sharply rising costs throughout the entire economy.

Further, I think it is significant that participation in Blue Shield has continued to increase sharply over the past year, and that we presently have participating agreements with almost 97 per cent of active physicians in the State. This record of voluntary control of charges and widespread support of Blue Shield is gratifying. Further, I think it is going to become increasingly important as Blue Shield is tested as to whether it is capable of delivering the goods as part of a nationally re-organized health delivery system.

ALTERNATIVE BENEFIT PACKAGES

Turning now to a second important measurement area, I would like to comment on how we stand on alternative benefit packages to keep people out of costly hospital beds. Here, too, I think Rhode Island Blue Shield is in a remarkably good position.

Just one year ago, I called on Blue Shield to develop an experimental prepaid group practice program that would give Blue Shield subscribers

and physicians a choice between the traditional fee-for-service solo practice of medicine and group practice. As you know, that speech and the subsequent Board decision to support such an experiment attracted considerable national attention. We were among the first Blue Shield Plans in the nation to adopt such a posture.

Since our last annual meeting, we have proceeded deliberately and thoroughly in researching all aspects of prepaid group practice, and I am pleased to announce today that we expect to have an operational prepaid group practice experiment with the Bristol County Medical Center no later than June 1st of this year. We will be bringing final details on the program to the Board for approval later this month; we expect to file with the Department of Business Regulation shortly thereafter; and if all goes well, we will be ready actually to go on the market sometime in May.

Several points in relation to this experiment are particularly significant from the physician's point of view.

First, we have developed the Bristol County model in the mainstream of prevailing medical practice, using an existing group of organized physicians, providing hospital coverage through presently existing Blue Cross benefits, and insisting on free or dual choice of plan in all groups where this new benefit will be offered. Since this experiment was developed on a very eclectic basis, combining the advantages of prepaid comprehensive care with the nationwide recognition and service of Blue Cross and Blue Shield for out-of-area coverage, it is going to be a truly superior plan in terms of service to subscribers.

Second, since this experiment has been deliberately structured around an existing group of physicians in private practice, it lends itself ideally to growth and transplantation if physicians and the public enthusiastically accept the idea of prepaid group practice. There is nothing to prevent us from setting up prepaid experiments on a similar basis with half a dozen other organized medical groups in the State, or even — with some modification — with groups of physicians in the hospital setting. Many of them have already expressed interest, and we intend to turn our attention to other groups as soon as the Bristol County experiment is working.

Third, the plan has been developed very specifically to meet the requirements of the Health Maintenance Organizations proposed under presently pending national legislation. Once this and

other programs are off the ground, Rhode Island Blue Shield will be in an excellent position to qualify as an HMO and set up any number of additional group practice experiments.

I do not mean to suggest that prepaid group practice will necessarily be the complete answer, my only purpose is to point out that we now have a model which offers maximum flexibility for future growth.

IMPROVEMENT IN BASIC BENEFITS

Even though prepaid group practice is an important alternative, we still need to improve our present Blue Shield basic benefits. In that regard, the entire benefit structure of both Blue Cross and Blue Shield is presently under study by a staff committee. The prime problem is not in determining what needs to be done, but rather where the money is going to come from to finance broader coverage.

It has been clear to us that there is a need for better coverage of ambulatory care, both of a diagnostic and preventative nature. Even though we are one of the few Plans in the country that pay full x-ray benefits in the doctor's office on all of our basic contracts, the fact remains that we don't pay for the routine office or outpatient visit.

The home and office rider on Plan 100 has not been successful. Groups simply won't buy it because of the high cost. We are seeing growing competition for available dollars to prepay health care. As long as employers are being forced to pour more and more dollars into hospital prepayment, due to increased use and increased cost of hospital care, it is going to remain very difficult to sell them on additional prepayment of ambulatory care.

One of the most pressing challenges facing the medical profession, in my opinion, is to find some way of controlling use of hospitals, to permit a shifting of prepayment premium dollars into the ambulatory setting. It is my strong personal opinion that any mechanism designed to do this must provide a financial incentive for doctors to keep patients out of the hospitals; otherwise, it will fail. Also, we must find a way of assuring health care buyers that dollars spent through prepaid ambulatory care will reduce the cost of inpatient care, not merely add to it. Prepaid comprehensive group practice offers one promising method of providing that assurance. We must find other, more widely acceptable methods.

ADMINISTRATIVE PERFORMANCE

The final area that I would briefly comment on is how Rhode Island Blue Shield presently stands in terms of administrative performance. I will mention several points of special interest.

First, by virtually all of the existing standards of measurement, we are maintaining our standing as one of the most efficient Plans in the country. We are doing particularly well in terms of our government business, and we are consistently ranked first or among the leading Plans in the nation in Medicare claims processing speed, and the lowest in the nation in operating cost per claim processed. Our operating costs on basic Blue Shield also compare very favorably with the rest of the country, and we're going to look even better in the future because more of the basic business is going on the computer.

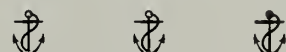
During the past year we put all basic Blue Shield claims onto an automated system, a change which has been in the developmental stage for well over two years. We are pleased that the changeover was accomplished with a minimum of inconvenience to physicians and Blue Shield members. In 1970 Blue Shield processed more than a million claims for the first time — up 30 per cent from the previous year and more than triple the volume of claims handled in 1965 — just five years ago.

One of the more tangible results of the automated process is the Plan's ability to make settlements to physicians twice monthly instead of once a month.

Among other noteworthy computer by-products is a quality control program which a staff member will explain to you in a few minutes.

SUMMARY

I would conclude that Rhode Island Blue Shield is coping with the immediate problems which I mentioned initially — namely cost control, experimentation with new methods of delivery, and consistently improving administrative performance. For these reasons and many more, we all should be very grateful to our Administrative Staff. I personally thank them. Your cooperation with and support of your Blue Shield Plan in the past year has, without question, been commendable and I solicit your continued loyalty.



Remarks At The 32nd Annual Meeting Of The R.I. Blue Cross Corporation

Effects Of Medical Education, Hospital Construction, Prospective Reimbursement, And State Regulation On Hospital Costs Are Discussed

By Arthur F. Hanley

I shall not make my usual review of the highlights of the past year, but rather talk with you about the coming year. I shall be stressing two key words: "balance" and "priorities," because I think these qualities more than anything else must be present in every decision we make about health care in 1971 and 1972.

All of you are familiar with the pressures that traditionally have pushed health care costs upward. But it may be fairly said that with continued inflation, continually increasing demand for health services, and a pending decision for a new medical school the upward pressures on hospital costs in our State may be more intense than at any point in recent history.

On the other hand, our depressed economy, increased public resistance to health care cost increases, and the new Blue Cross prospective reimbursement system are combining to put more pressure on hospitals and physicians to keep costs down than ever before.

The health care system in our State is in a monumental cost squeeze, and there are no signs any-

where that the pressure will soon ease. This means simply that decision making will have to become more scientific and more critical: every request for new programs, people, or services must be priced out, weighed against available dollars, and tested in terms of priorities against other needs.

I want to discuss specifically some of the pressures that are pushing costs upward, and then make a few observations about our new prospective reimbursement system, which may be the strongest force yet for blunting the rate of cost increases.

EFFECT OF MEDICAL EDUCATION

One of the most cost significant decisions facing hospitals at the present time is the proposed expansion of Brown University's Bio-Medical sciences program into a full medical school. The reasons why Rhode Island needs its own medical school have been widely publicized, and there is no need for us to repeat them. I would stress that Blue Cross does not oppose a medical school at Brown, but we are very much concerned about the cost implications involved, and we would urge that hospitals move very carefully into decisions in this area.

Our understanding of the tentative plans for a seven-year medical school indicates that at mini-

ARTHUR F. HANLEY, *Executive Director, Blue Cross-Blue Shield*

Meeting held March 18, 1971

mum hospitals would have to double the number of full-time teaching physicians on their staffs. If optimum staffing is obtained, up to 75 additional teaching physicians would be needed by the five affiliated hospitals within the next three years. This would load more than \$2 million per year of additional salaries for teaching physicians alone into hospital costs. Although some of this expense would be offset by reimbursement from the University, research grants, and so on, a major portion of the cost would be added into hospital bills paid by Blue Cross, by other third parties, and by the general public, unless present financing patterns are changed.

Further, it is clear that teaching physicians' salaries represent only the beginning of the true cost impact. Obviously, each physician will require space, equipment, assistants, and so on. Obviously, infusion into the health care system of up to 75 new teaching physicians is going to increase radically the sophistication of programs and services in each affiliated hospital. It is a well-known fact that in medical-school affiliated hospitals the number of employees per patient is higher, the number and sophistication of laboratory tests increases, the length of stay generally goes up, and the resulting cost per hospitalized patient increases markedly over the cost in non-teaching hospitals.

I would repeat that we do not oppose the proposed medical school. We recognize that in addition to improving further the quality of health care in the State, the medical school can provide a badly needed coordinating function as hospitals plan for unmet health care needs. We are simply urging that the cost implications be identified by each affiliated hospital, translated in terms of additional cost per patient day, and understood by the general public before final decisions are reached.

Doctor Cecil Sheps, a nationally known authority in this field, recently conducted a pre-feasibility study of the proposed expansion under funding by the Tri-State Regional Medical Program. Doctor Sheps found that the present Brown program should be expanded both in size and scope. But he said that "it is difficult to conceive of this extension of medical education being feasible without substantial support from both federal and state governments. This must be obtained."

There is a clear trend across the country for direct State subsidy of medical schools. Admittedly, the present State financial situation makes it diffi-

cult to conceive of such subsidy being forthcoming. The cost of medical education is now one of the largest and least understood segments of the patient's bill. It has been estimated that up to one-third of the bill in some hospitals supports educational costs of one kind or another. Blue Cross is looking with increasing concern at this substantial item. As it becomes more and more difficult for the Plan to obtain necessary rate increases to pay hospital bills, we may be forced to insist that new funding sources for educational costs be sought and that such costs not be commingled with the direct costs of patient care.

Blue Cross has for some time been urging that SEARCH, our new federally-funded health research agency, address itself to this problem of medical education costs on behalf of the hospitals, Blue Cross, and the University. It seems to us that the ideal time for such study to begin would be now.

The proposed medical school is only one of a number of factors that will have heavy impact on health care costs in the near future. When Blue Cross talks about costs, we embrace in that term both the increasing cost per unit of service, and the cost of additional services used, for both are components of the community's total health care bill.

HOSPITAL EXPANSION

We see a considerable amount of new hospital construction now in progress or in the talking stage, and obviously this is going to have an effect on use of services, Blue Cross payments, and our membership rates.

Rhode Island Hospital will complete next year a \$26 million ambulatory patient center. It has been pointed out that depreciation alone on a \$26 million building is a substantial cost item. But of more interest is the fact that we anticipate a dramatic impact on the availability — and consequently on the use — of ambulatory services once the APC is opened. Health care experts for some time have been emphasizing ambulatory, or outpatient services, to offset hospital bed needs. It would appear that Rhode Island does not anticipate a reduction in inpatient care, since it is planned to open 100 additional beds this autumn, when the renovated Jane Brown unit is completed.

Kent County Hospital will also open 96 beds and expand outpatient facilities when its approved \$6 million construction program is completed in mid-1972. Newport Hospital has on the drawing

(Continued on next page)

boards and already approved a \$2 million renovation of its Vanderbilt Wing. Woonsocket Hospital has proposed to the Planning Council, and temporarily withdrawn plans, for a \$5 million construction program. Still in the pondering stages are Providence Lying-In Hospital's needs for substantial renovation, Pawtucket Memorial's need for an ambulatory center, similar ambulatory needs voiced by Roger Williams, plans for a joint radiation therapy program at Roger Williams and Rhode Island, and others — all no doubt sincerely viewed as needed by the individual hospital — but all adding substantially to an already massive annual budget for hospital care in this State.

When we combine the pressures of an emerging medical school with those brought to bear on hospitals by continued run-away inflation, skyrocketing demand for services, and the need to keep up with medical progress, surely my hospital friends will think I have to be deaf, blind, and naive to talk about slowing down the cost spiral.

I like to believe I am none of these, and yet I am certain that all of the cost-inflationary pressures at some point are going to collide squarely with the absolute necessity of bringing costs under control. And, I think that collision may be coming this year. All of which leads me to my final topic of discussion, which is prospective reimbursement.

I'm sure everyone in the health care field recognizes that the time has come when some kind of external review and control must be applied to hospital costs. The public mood is such that it is no longer a question of "whether" controls will be applied, but "how," and "by whom."

In other states, such as Massachusetts, New York, New Jersey, Maryland, Pennsylvania, and — most recently — the State of Washington, the trend is to ceilings on hospital charges set by the State and administered either through the Department of Health or through a State-appointed rate-setting commission.

PROSPECTIVE REIMBURSEMENT

Here in Rhode Island we believe that the prospective reimbursement system already agreed to by all of the hospitals provides a mechanism which, if effectively implemented, may well remove the necessity of creating any other device to set hospital rates.

The hospitals have already offered to negotiate their payment rates with the State as well as with Blue Cross, based on complete review of hospital budget data by the State and Blue Cross. This in

itself is highly commendable, more desirable, and more effective than any kind of across-the-board legislated cost ceiling, since it brings every decision down to individual hospital levels, and does not depend on averaging or other artificial means of establishing permissible cost increases. And, since the hospital has the privilege of negotiating with third parties (including the State) for necessary operating income, the prospective system removes the danger of too restrictive State-set rates which might stifle progress, hinder innovation, and damage necessary quality of care.

We believe, then, that prospective reimbursement has the potential of being the most important cost control innovation that has been seen in many years. But if its potential is to be realized, the health care system somehow must be given enough time to prove the value of this new approach.

The proof of that potential rests squarely on the shoulders of Blue Cross and hospitals. Further, I am convinced that we must prove the system this year, not in 1973 or 1974, or at some future point.

That is the prime reason why, when we start reviewing hospital budgets this June Blue Cross feels it has to take a very hard line on costs.

The only real test of effectiveness for prospective rating in the public's mind is whether the negotiations this year result in projected hospital cost increases substantially less than those of previous years. Unless we are able to show in hard dollar figures that 1971-72 projected cost increases are considerably less once all the budgets are approved, the public may rightfully conclude that prospective rating is something less than a success.

There are other reasons why we intend to take a hard line on costs. We are sincerely convinced that the public cannot forever foot the bill for hospital cost increases of 15 per cent or 18 per cent or 20 per cent per year. We understand all the pressures on hospitals for more and better services, more sophisticated equipment and programs, more well-trained personnel, more teaching physicians all of which are justified in the name of "quality of care." But there comes a point where improved quality of health care can be financed by the public only at the sacrifice of quality of food, clothing, shelter, education, and recreation, all of which are essential to a balanced life.

Further, we believe that health care decisions in the past have been overwhelmingly influenced by professionals who have dedicated their lives to

(Concluded on Inside Back Cover)

Rhode Island Medical Society Physicians Service

Report Of The 22nd Annual Meeting Of The Corporation At Providence, R. I. March 3, 1971

The 22nd annual meeting of the Corporation of the Rhode Island Medical Society Physicians Service was held in the Garden Room of the Providence Biltmore Hotel on Wednesday, March 3, 1971. The meeting was called to order by the President, Dr. Arnold Porter, at 5:20 p.m.

Members of the Corporation in attendance were: Dr. Carl V. Anderson, Dr. Richard G. Bertini, Mr. Albert Bonte, Dr. Bertram H. Buxton, Jr., Dr. Joseph E. Caruolo, Mr. George Chaplin, Dr. Joseph D. DiMase, Dr. Charles S. Dotterer, Dr. Herbert Ebner, Dr. Martin E. Felder, Mr. Daniel Ford, Dr. David Freedman, Dr. Alvin G. Gendreau, Dr. Frank Giunta, Dr. Edmund T. Hackman, Dr. Herbert F. Hager, Dr. David Hallmann, Dr. Milton W. Hamolsky, Dr. John B. Lawlor, Rev. Joseph L. Lennon, O.P., Dr. Robert V. Lewis, Dr. Henry M. Litchman, Dr. Vincent I. MacAndrew, Dr. William J. MacDonald, Dr. Earl J. Mara, Dr. Peter L. Mathieu, Jr., Mr. Charles V. McCaffrey, Dr. James A. McGrath, Judge Florence K. Murray, Dr. Raul Nodarse, Dr. John C. Osenkowski, Dr. Frederick A. Pierce, Jr., Dr. Arnold Porter, Dr. Charles B. Round, Dr. Stanley D. Simon, Dr. Leonard S. Staudinger, Dr. George H. Taft, Dr. Jeannette E. Vidal, and Dr. Elihu S. Wing, Jr.

Also present were Mr. Arthur F. Hanley, Executive Director, and nine members of his administrative staff, and John E. Farrell, Executive Secretary of the Corporation.

Members of the Corporation absent were: Dr. Rocco Abate, Dr. F. Bruno Agnelli, Dr. Charles J. Ashworth, Dr. Paul E. Barber, Dr. John T. Barrett, Dr. Robert E. Baute, Dr. Harold L. Beddoe, Chelcie C. Bosland, Ph.D., Dr. Joseph E. Cannon, Dr. Francis P. Catanzaro, Dr. Nathan Chaset, Dr. George V. Coleman, Dr. Dominic Coppolino, Dr. John J. Cunningham, Dr. Morgan Cutts, Dr. John A. Dillon, Dr. Joseph L. Dowling,

Jr., Dr. Frank P. Duffy, Mr. Emil Fachon, Dr. Charles Farrell, Dr. Seebert Goldowsky, Dr. John P. Grady, Mr. John J. Hall, Mr. John J. Halloran, Dr. John C. Ham, Dr. Robert C. Hayes, Dr. Thomas Head, Dr. Paul J. M. Healey, Dr. Stephen J. Hoyer, Mr. Paul J. Johnson, Dr. J. Gerald Lamoureux, Dr. Thomas R. Littleton, Dr. Frank Merlino, Dr. Anthony J. Migliaccio, Mr. Felix Mirando, Dr. James B. Moran, Dr. Gustavo A. Motta, Dr. David Newhall, Dr. William J. O'Rourke, Dr. Ralph F. Pike, Mr. George Ramsbottom, Dr. James A. Reeves, Dr. Joseph L. C. Ruisi, Dr. Robert P. Sarni, Dr. Francis Scarpaci, Dr. Richard P. Sexton, Mr. John Shepard, II, Dr. William R. Thompson, and Dr. John J. Walsh.

ANNUAL REPORT OF THE SECRETARY

The President noted that the annual report of the Secretary had been included in the handbook sent to the members prior to the meeting.

Action: A motion was made, seconded and voted that the annual report of the Secretary, as submitted, be approved and placed on record. (Copy is made part of the official records of the meeting.)

ANNUAL REPORT OF THE TREASURER

Mr. George W. Chaplin, Treasurer, stated that his annual report was included in the handbook sent to the members, and he stated he would answer any inquiries from members of the Corporation.

Action: A motion was made, seconded and voted that the annual report of the Treasurer, as submitted, be approved and placed on record. (Copy of the report is made part of the official records of this meeting.)

ANNUAL REPORT OF THE PRESIDENT

Dr. Arnold Porter read his annual report, copy of which is made part of the official record of the meeting.

(Continued on next page)

NOMINEES FOR BOARD OF DIRECTORS

Non-Physician Nominees:

Dr. Joseph E. Caruolo, Chairman of the Nominating Committee, submitted for the Committee as nominees for 3-year terms each on the Board of Directors the following:

Judge Florence K. Murray

Mr. Francis E. Doherty

Mr. Richard P. Welch

Action: A motion was made, seconded and unanimously adopted that the nominees submitted by the Nominating Committee be elected to the Board of Directors of the Corporation.

Physician Nominees:

Doctor Porter noted that the Secretary of the Rhode Island Medical Society had notified the Corporation that the Society had nominated as Directors for 3-year terms each on the Board of Directors the following:

Paul E. Barber, M.D.

Seebert J. Goldowsky, M.D.

Robert V. Lewis, M.D.

Leonard S. Staudinger, M.D.

Action: A motion was made, seconded and adopted that the physicians nominated by the Rhode Island Medical Society be elected to the Board of Directors.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Arthur F. Hanley, Executive Director, stated he had no formal report to make to the Corporation. He briefly commented on the fact that the Corporation had one of the most successful programs of any of the Blue Shield plans in the nation, and he praised the fine work of the Board of Directors and of the administrative staff.

He introduced to the Corporation the following members of the staff:

Mr. Joseph Sullivan, Senior Assistant Executive Director, Blue Shield Affairs

Mr. Benjamin Alfano, Senior Assistant Executive Director

Mr. William Gillan, Director, Computer Operations

Mr. Albert Brennan, Assistant Executive Director, Marketing and Government Affairs

Mr. Armand Leco, Assistant Executive Director, Hospital Affairs

Mr. John Anderson, Manager, Public Relations

Mr. Albert Lewis, Manager of Professional Relations

Mr. Hanley also informed the Board that Doctor Porter was the nominee of District I of the Blue

Shield Plans to serve on the Board of Directors of the National Blue Shield Plans.

He then introduced and called upon Mr. Douglas McIntosh, Director of Blue Shield affairs, to make a presentation, utilizing lantern slides, of the automated system operated by the Plans. Mr. McIntosh gave a most informative talk on the methods used for handling claims, the development of prevailing fee ranges by specialty, and by geographic location of the physician, the quality control audit program, utilization review, and the handling of the Medicare program for the Social Security Administration.

NEW BUSINESS

Doctor Porter inquired if any member had any matter to bring before the Corporation.

Dr. Raul Nodarse inquired regarding the impact on Blue Shield of the new group programs being developed in the State.

Mr. Hanley reported that the group program being developed with Bristol County Associates, as reported by Doctor Porter, would result in no change as it would work primarily within the Blue Shield structure. He expressed the opinion that the requirement that enrollees of the Group Health Association have dual choice of programs, plus the anticipated premium charge per subscriber, would present a formidable task in gaining a sizable enrollment in that program in the immediate future. He also commented that the Neighborhood Health Centers plan coverage for an estimated 10,000 persons, of whom more than 50 per cent would qualify under the Medicaid program.

ADJOURNMENT

The meeting was adjourned at 6:40 p.m., and the members were guests of the Corporation at dinner.

Respectfully submitted:

JUDGE FLORENCE K. MURRAY

Secretary

ANNUAL REPORT OF THE SECRETARY

The 21st Annual Meeting of the Corporation of the Rhode Island Medical Society Physicians Service was held at the Providence Biltmore Hotel on Wednesday, March 4, 1970, at which time annual reports of the Secretary and the Treasurer were received and approved, and the President delivered an outstanding report on the progress of the Corporation's programs. The Corporation elected for three year terms each to the Board of Directors the following: Doctors Joseph E. Caruolo, William J. MacDonald, Earl J. Mara, John J. Walsh, and

(Continued on Page 283)

METHYLPREDNISOLONE FOR NEAR DROWNING

Anesthesiologists have for some time been using cortisone related drugs for the prophylaxis of pneumonia following aspiration of gastric contents. There is now evidence of their value in the treatment of near drowning.

Sladen and Zauder of the University of Texas have reported results in a small series of patients treated for pulmonary edema following near drowning in fresh water. Patients received oxygen and sodium bicarbonate upon arrival in the emergency room, followed by mechanical ventilatory support through an endotracheal or tracheostomy tube. In the study group this standard therapy was accompanied by the administration of methylprednisolone sodium succinate. The drug was administered intravenously every four hours for 72 hours.

The action of methylprednisolone is nonspecific, and its site of action is local. The antiinflammatory effect is proportional to its concentration at the site of cellular damage. Its role is to reduce the

acute inflammatory process, thus resolving the pulmonary edema.

Although the number of cases in the report is small, the results are highly suggestive. Three patients receiving the mechanical therapy, but no drugs, succumbed. All seven patients receiving the methylprednisolone survived.

While greater experience will be required to confirm the value of this therapy, its relative innocuousness and probable efficacy as a life-saving measure render its use under appropriate circumstances almost mandatory. With a new vacation season upon us, it is of great importance that the apparent usefulness of this new treatment for near drowning be known in the hospital emergency rooms around the state.

REFERENCE

SLADEN A, ZAUDER HL: Methylprednisolone therapy for pulmonary edema following near drowning. *JAMA* 215:1793-1795, 15 Mar 71

MEDICAL SCHOOL CONTRIBUTIONS AND AMA-ERF

The presentation at the annual meeting of the Society of a grant of \$1,695.64 to the Brown University Division of Biological and Medical Sciences highlights once again the tremendous work that is done annually by the Woman's Auxiliary to the Rhode Island Medical Society to assist medical education through the American Medical Association Education and Research Foundation.

Rhode Island physicians contribute generously to the support of the individual medical school of their choice, but it appears that most of these donations are sent direct to the school by the physician. The Woman's Auxiliary, in the forefront in supporting loan funds for deserving medical school students — since 1962 forty-eight such loans amounting to \$55,250 went to Rhode Island medical students, interns, and residents through the AMA-ERF — merely asks that every medical school donation be routed through the AMA-ERF with the donor listing the school of his choice to receive the gift. Proper acknowledgement will go to the doctor from his medical school, the AMA-ERF will be recognized, and our Woman's Auxiliary will receive the additional encouragement to continue its important role in fostering medical education.

The grant to Brown this year represented AMA-ERF funds earmarked by donors for Brown, plus contributions from the Woman's Auxiliary, and other sources. The Auxiliary funds come from their various fund raising projects during the year, and under the direction of Mrs. Phillip Lappin of Pawtucket, state chairman in 1970, the Auxiliary contributed \$1,733.73, while physicians contributed \$1,143.

The position of the AMA-ERF and the American Medical Association respecting medical education is well established. Each year the AMA appropriates over \$1,700,000 in support of its Division and Council on Medical Education. Since 1960 all United States medical schools have received over \$12 million from the AMA-ERF.

Your Woman's Auxiliary deserves full support in its project. All it asks at this time is that when the physician makes a donation to his medical school that he send it to the AMA-ERF, 535 North Dearborn Street, Chicago, Illinois, 60610, and stipulate the name of the school to be the beneficiary. His purpose is completely fulfilled, and the Auxiliary gets additional credit for increased support of education.

PRIMER: THE KALLIKREIN-KININ SYSTEM

The close resemblance between the pharmacologic actions of the kinin group of polypeptides and the clinical features of various allergic and inflammatory disorders has attracted increasing attention. As we learn more about the kinins and their guardian enzymes, the kallikreins, the more likely it appears that they play a basic role in the mechanisms of defense and repair. Exploration of this system may very well provide answers to ancient biomedical questions. While the classical cardinal signs of inflammation — calor, dolor, rubor, and tumor — have been recognized since time immemorial, we have learned little about the mechanisms that initiate and mediate the process.

The existence of the Kallikrein-Kinin System was suspected as early as 1909, when it was shown that urine contained substances capable of producing hypotension. They were later found also in saliva and pancreas. Because of its high content in pancreas, the substance was named kallikrein, after kallikreas, the Greek word for pancreas. Werle and associates in 1937 showed that a mixture of human plasma and salivary gland extract caused contraction of pig ileum, while neither separately caused this reaction. They concluded that plasma contained a biologically active substance capable of causing smooth muscle contraction when released by an enzyme in salivary tissue. In subsequent years they demonstrated that the active material was a polypeptide cleaved from a plasma alpha-globulin by the enzymatic action of kallikrein.

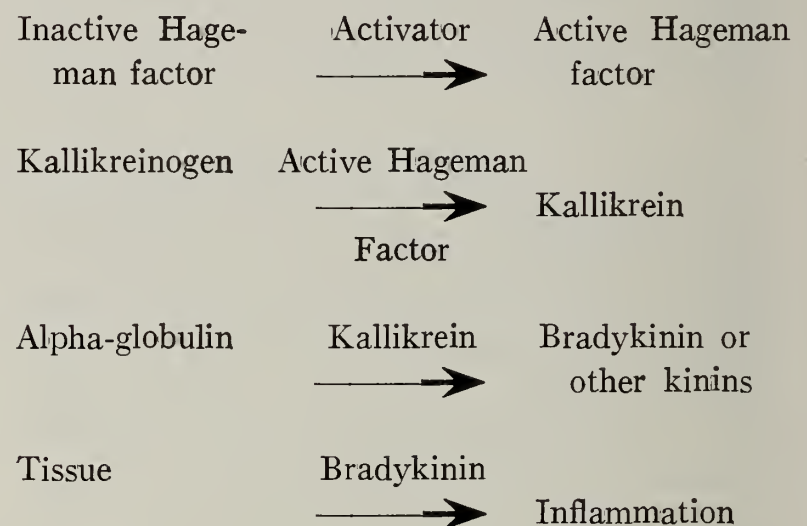
Subsequent studies demonstrated that one kinin produced a histamine-like effect, but with slower action — hence the designation bradykinin. By 1962 the molecular configuration of bradykinin and related kinins had been pretty well worked out.

The intrinsic kinin generating system of blood itself is triggered by the same mechanism as that which sets off the coagulation sequence — namely, the activation of Hageman factor by various chemical and physical changes (acidification, salinization, contact with glass or other wettable surfaces).

In the absence of Hageman factor, neither coagulation nor kinin production can be brought about. Hageman factor directly converts kallikreinogen into active kallikrein. This in turn splits off a kinin from a widely available alpha-globulin (kininogen).

A kallikrein can be found in almost any body tissue. The nature of the kinin produced appears to derive from the specificity of the particular kallikrein involved, which in turn depends upon its site of origin. This differentiation probably accounts for the ability of the kinins to localize their effects. There are 9, 10, and 11 amino acid kinins and bradykinins, depending upon the specific kallikrein. Kinins in minute amounts produce profound effects on small blood vessels and can of themselves produce the cardinal features of inflammation: vasodilation, increased capillary permeability, leukotaxis, and pain.

These sequences may be summarized as follows:



Kinins have been found in the synovial fluid of patients with arthritis, and their implication in many other inflammatory situations is under investigation. It is suggested that the anti-inflammatory properties of such varied substances as the corticosteroids, aspirin, phenylbutazone, and amidopyrine may lie either in their ability to block kinin formation or block receptor sites susceptible to kinin action.

INTERFERON AND THE TREATMENT OF CANCER

Living cells in self-defense against viruses, including those that regularly produce cancer, synthesize a low molecular weight protein called interferon. It is produced intracellularly and ex-

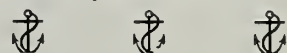
creted. Interferon on the surface of any cell of the same species will inhibit, annul, and protect the cell against viral injury. When cancer is associated with a virus, interferon produced in cell cul-

tures under the stimulus of the virus and then injected into the affected animal will significantly ameliorate the clinical disease, and in early cases may be curative. This conclusion is a liberally interpreted, wide generalization based on the work of Graff, Kassel, and Kastner, recently reported in the *Transactions of the New York Academy of Science*. Mice with genetically transmitted leukemia and mice susceptible to mammary carcinoma, if treated with interferon in the developmental stage of the viral invasion, can be completely protected. Based on this work it seems reasonably clear now that a virus actually causes genetic cancer.

Genetic susceptibility is a necessary condition in those animals previously designated as having genetic cancer; but it is not a sufficient condition. There are serious and formidable limitations to the use of interferon; as a therapeutic agent it is

species-specific.. The production of interferon can be rapidly stimulated, both by natural viral invasion or by the injection of double-stranded RNA. Inducers which mimic RNA have been described by Hilleman, especially "poly I:C", an artificial RNA duplex. Another inducer has been recently reported in *Science* by Kreuger and Mayer; it is tilorone hydrochloride, an extremely small molecule, but a very active interferon inducer even when administered orally. Clinically it is an effective prophylactic agent against both DNA and RNA virus groups in the nine distinct viral types studied to date.

A million dollars have been allotted by the National Institute of Health for an intensification of the study of interferon; it is more than just an interesting low-molecular protein; both the study and money seem well justified.



LAB SERVICES IN DIAGNOSTIC CHEMISTRY TO BE CURTAILED JULY 1, 1971

Malcolm C. Hinchliffe, Chief, Division of Laboratories, Rhode Island Department of Health, has sent the following communication to physicians:

"Public health laboratories today are facing demands for services that are quite different from past decades and which require a review of existing services with emphasis on those of particular significance for today's needs. In the last few years new laboratory programs for air pollution, drug abuse, metabolic diseases, rubella testing, lead screening in children, expanded food surveillance and pesticide analysis have been introduced.

"The critical need for these programs is obvious and coupled with the equally important demand for economy in government necessitates a limitation of laboratory services of lesser priority. Certain services in the area of biochemistry would appear to fall within this category. Availability of hospital and private clinical laboratories and existence of various state, federal and private sources for payment of such analytical services suggest that continuation of these programs by the state laboratories no longer is essential.

"Therefore, effective July 1, 1971, the Diagnostic Chemistry laboratory of the Health Department will discontinue all urinalyses and blood chemistry determinations with the exception of glucose analysis of blood and urine submitted in connection with diabetes screening programs.

"Discontinued services include: Urinalysis, blood chemistries for: cholesterol, urea nitrogen, glucose levels as follow-up of therapy, creatinine, uric acid.

"We regret any temporary inconvenience this curtailment may cause in your practice. Ultimately, it is hoped the decision will permit greater emphasis on the critical health laboratory needs of this decade."



WILLIAM J. MACDONALD, M.D.
of Rumford, R. I.

*President of the
Rhode Island Medical Society*

1971 - 1972

President's Message

Good health is no longer considered as only the absence of disease but now has come to include a number of non-medical considerations which contribute to the quality of living.

Among the factors that have a direct bearing on physical health and that are generally beyond the control of physicians are adequate housing and sanitation, quality education, sufficient clothing, good nutrition, self-respect, and respect of others.

Good health also requires the control of such social problems as smoking, alcoholism, venereal disease and drug abuse.

The death from myocardial infarction of a forty-year old executive who had thorough annual preventive examinations but refused to stop smoking, reduce his weight, or limit his high cholesterol diet, counts just as much against the quality of medical care in the standard statistics as does the death of a forty-year old uneducated, malnourished drug addict who never sought medical care despite its ready availability in his neighborhood.

Although we as physicians and as a medical society can do very little alone to prevent such deaths, we do share the responsibility with the rest of the community to correct these deficiencies in any way we can.

During the coming months I hope to stimulate the members of our society, through the appropriate committees, to take a leading role in coordinating the efforts of the various agencies engaged in the fight against the two modern scourges of our youth, venereal disease and drug abuse.

Drug abuse is rampant in almost every college, high school, and junior-high school in the country. The incidence of syphilis is approaching the million mark this year and gonorrhea cases are nearly two million in number.

The courts, schools, police, Department of

Health, physical and mental health clinics, and physicians are all working on these problems but with little or no coordination of effort.

The incidence of drug abuse and venereal disease is finally being reduced in some communities by coordinated community action.

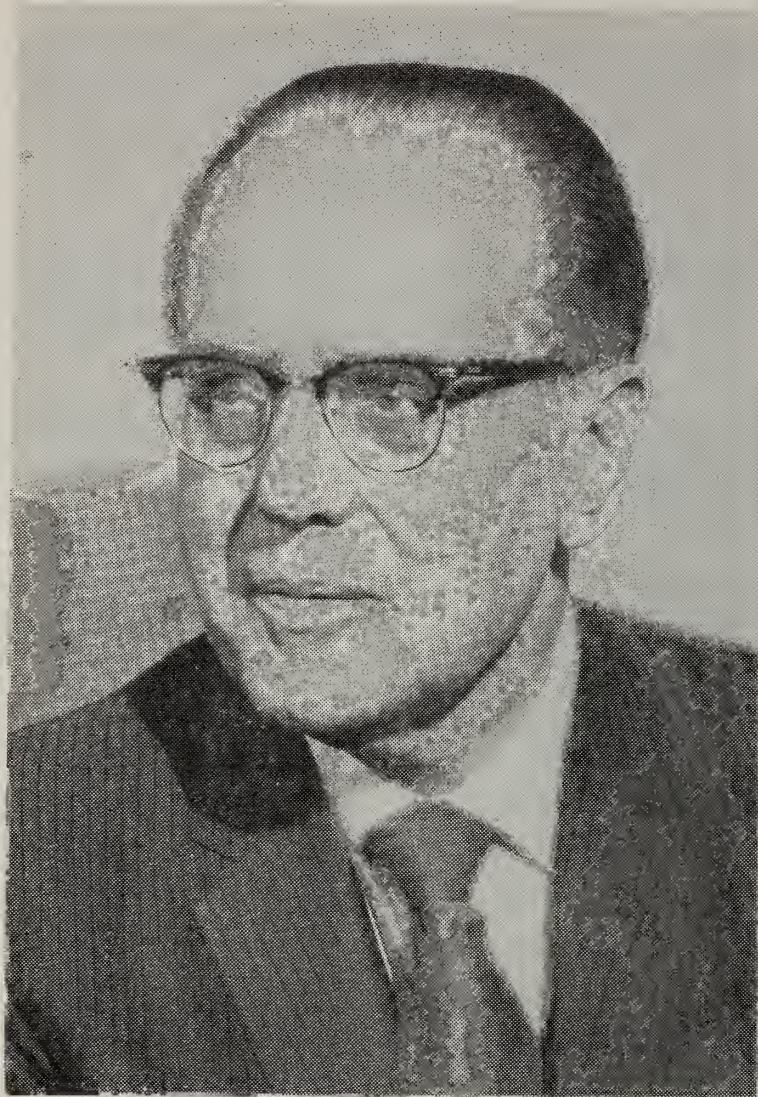
At this time of the year the state legislature and federal Congress are in session. The officers, executive staff, and various committee members of this society are in almost daily communication with the various private and public agencies concerned with health care and health legislation. Each week a new crisis arises which requires the presence of a society representative at a conference or meeting.

As the year progresses we will see the development of two prepaid health plans, the Bristol Medical Associates Group Health Plan, and the Rhode Island Group Health Association plan. Also the Providence Health Centers, Inc. have proposed an expansion of their facilities as Health Maintenance Organizations. The Providence Medical Association is also considering the possibility of developing a Medical Foundation under its auspices. The incorporation of SEARCH, the Rhode Island Health Services Research Foundation, Inc., within the past year, introduces into our state an entity which may have a very important impact on the health care industry in Rhode Island.

Finally, I must emphasize the importance of the active participation of all the members of our society in the selection of our state and national representatives and senators. These are the men who make the laws which will determine the future of medical practice.

The Rhode Island Medical Political Action Committee plans to take an active part in the approaching elections. Please support and strengthen this important political voice of medicine in Rhode Island.

WILLIAM J. MACDONALD, M.D.
President

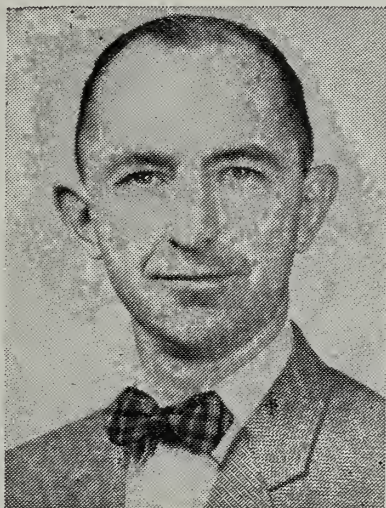


RICHARD J. KRAEMER, M.D.
of Warwick, R. I.
Vice President of the
Rhode Island Medical Society
 1971 - 1972



ROBERT V. LEWIS, M.D.
of Providence, R. I.
President-Elect of the
Rhode Island Medical Society
 1971 - 1972

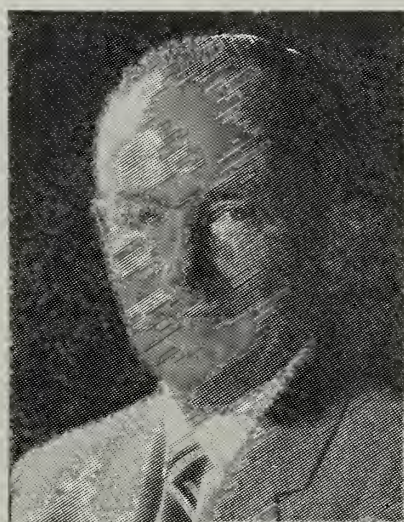
OFFICERS, 1971-1972, THE RHODE ISLAND MEDICAL SOCIETY



STEPHEN J. HOYE, M.D.
of Pawtucket
Secretary



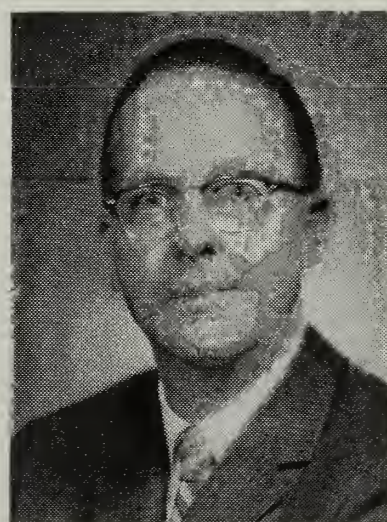
JOHN P. GRADY, M.D.
of Providence
Treasurer



J. E. FARRELL
Executive Secretary



SEEBERT J. GOLDOWSKY, M.D.
of Providence
Editor-in-Chief
R.I. MEDICAL JOURNAL
Alternate Delegate to the A.M.A.



EDMUND T. HACKMAN, M.D.
of Warwick
Delegate to the A.M.A.

General Meeting Of The Rhode Island Medical Society

New Officers Installed As Society Conducts 160th Annual Session

A general meeting of the Rhode Island Medical Society was held on Saturday, April 24, 1971 during the 160th annual Scientific Assembly held at the Providence Biltmore Hotel. The meeting was called to order by the President, Dr. Richard P. Sexton, at 2:45 p.m. There were no resolutions or proposals presented from the floor.

The secretary, Dr. Stephen J. Hoyer, reported that the House of Delegates in meeting on March 24, 1971 had elected officers and standing committees to serve until the next annual meeting of the Society. He read the names of officers elected, and Doctor Sexton introduced the new president, Dr. William J. MacDonald of Providence who briefly expressed his appreciation for the honor bestowed upon him, and he asked for the continued cooperation of the membership. The meeting was adjourned at 2:55 p.m.

NEW PRESIDENT PROVIDENCE OBSTETRICIAN

Dr. William J. MacDonald, a Providence obstetrician and gynecologist, was installed as the 112th President of the Rhode Island Medical Society. Doctor MacDonald succeeded Dr. Richard P. Sexton, a Providence plastic surgeon. Named as President-elect was Dr. Robert V. Lewis, a Providence internist who succeeds Doctor MacDonald.

Named Vice-President was Dr. Richard J. Kraemer, a general practitioner in Warwick. Dr. Stephen J. Hoyer, a Pawtucket surgeon, was re-elected Secretary, and Dr. John P. Grady, a Cranston pediatrician, was renamed Treasurer.

A member of the Board of Directors of the Rhode Island Blue Cross, Doctor MacDonald is a past President and former Treasurer of the Providence Medical Association.

The new president received his elementary education in East Providence and he was graduated from Brown University in 1940. Three years later

he received his doctorate degree in medicine from the Cornell University Medical School. After residencies at Rhode Island and Providence Lying-In Hospitals, and Woman's Hospital in New York, he established a private practice in Providence in 1946. Chief of Obstetrics at Providence Lying-In Hospital, Doctor MacDonald also holds an assignment as a clinical instructor in obstetrics and gynecology at Tufts University Medical School. He is a Diplomate of the American Board of Obstetrics and Gynecology.

Doctor MacDonald has also been a delegate to the State Medical Society for several years and a member of the Executive Committee of the Providence Medical Association.

DOCTOR KRAEMER NAMED VICE-PRESIDENT

Dr. Richard J. Kraemer, a Warwick general practitioner, is a former Chief of Staff at the South County Hospital and Kent County Memorial Hospital. The new vice-president received his elementary education in Providence, attended La Salle Academy, and was awarded a bachelor of philosophy degree from Providence College. Doctor Kraemer was awarded his doctorate degree in medicine from the Jefferson Medical School in Philadelphia in 1935.

He completed an internship and residency at Stamford Hospital in Connecticut prior to his return to Rhode Island.

Doctor Kraemer is a past Councilor from the Washington District Medical Society to the Council of the Rhode Island Medical Society, past president of that county district medical society, and past president of the American Academy of General Practice. His keen interest in the problems of the aged is reflected in the numerous offices which he has held in the American Geriatrics Society. Doctor Kraemer is that Society's representative to the

(Concluded on Page 288)

Officers And Elected Committees, 1971-1972 Of The Rhode Island Medical Society

*Elected By The House Of Delegates,
March 24, 1971*

OFFICERS

President: William J. MacDonald, M.D.
Vice President: Richard J. Kraemer, M.D.
President-Elect: Robert V. Lewis, M.D.
Secretary: Stephen J. Hoyer, M.D.
Treasurer: John P. Grady, M.D.

STANDING COMMITTEES

(President and Secretary, ex officio members)

Industrial Health

Thomas J. Dolan, M.D. (Chairman)
Richard G. Bertini, M.D. (Pawt.)
Philip J. Lappin, M.D. (Pawt.)
H. Raymond McKendall, M.D.
John E. Murphy, M.D. (Kent)
John B. Nally, M.D. (Newport)
Mendell Robinson, M.D.
Robert P. Sarni, M.D.
Joseph E. Wittig, M.D. (Kent)

Public Laws

Carl F. DeLuca, M.D. (Chairman)
F. Bruno Agnelli, M.D. (Wash.)
Andrew S. Blazar, M.D.
Edward J. Gauthier, M.D.
Thomas F. Head, M.D.
Byron R. Quinn, M.D. (Pawt.)
William A. Reid, M.D.
Leonard S. Staudinger, M.D. (Woon.)

Library

Harold G. Calder, M.D. (Chairman)
George V. Coleman, M.D.
Marshall N. Fulton, M.D.
Mary Lekas, M.D.
Jay M. Orson, M.D.
Francesco Ronchese, M.D.
Thomas Perry, Jr., M.D.
Guy A. Settipane, M.D.
Johannes Virks, M.D.

Publications

John A. Dillon, M.D. (Chairman)
Bertram H. Buxton, Jr., M.D.
Walter Cotter, M.D.
Herbert Fanger, M.D.

John F. W. Gilman, M.D.
Charles Hall, M.D. (Newport)
Robert V. Lewis, M.D.
Peter L. Mathieu, Jr., M.D.
Guy A. Settipane, M.D.

Medical Economics

Kenneth Liffmann, M.D. (Chairman)
Robert E. Bestoso, M.D. (Newport)
John J. Cunningham, M.D. (Pawt.)
Peter C. H. Erinakes, M.D. (Kent)
Martin E. Felder, M.D.
Thomas F. Head, M.D.
Francis McNelis, M.D.
Ralph F. Pike, M.D.
Albert F. Rocco, M.D.

Scientific Work and Annual Meeting

Robert P. Davis, M.D. (Chairman)
Frank G. DeLuca, M.D.
John A. Dillon, M.D.
Russell P. Hager, M.D. (Kent)
Milton W. Hamolsky, M.D.
Henry T. Randall, M.D.
Robert W. Riemer, M.D.
Mendell Robinson, M.D.
A. A. Savastano, M.D.

Public Policy and Relations

William J. MacDonald, M.D., President
Robert V. Lewis, M.D., President-Elect
Stephen J. Hoyer, M.D., Secretary
Stanley D. Simon, M.D.
Richard P. Sexton, M.D.

Speaker of the House

John J. Cunningham, M.D. (Pawt.)

Vice Speaker of the House

John C. Ham, M.D.

THE EPIDEMIOLOGY OF LEUKEMIA

(Continued From Page 262)

a tranquilizer containing perphenazine which is known to produce certain blood dyscrasias such as pancytopenia and eosinophilia. Apparently she has continued to use Triavil® although the herpes zoster was successfully treated. The patient has noticed more fatigue than usual since 1967. Menstrual difficulties associated with menopause began in January, 1968, and noticeably increased fatigue began about September, 1968. An exact date of onset is difficult to ascertain, however, December, 1967, the mid-point between the end of herpes zoster and the beginning of additional noticeable fatigue, is used in this paper as the approximate date of onset.

The patient's sister had breast carcinoma more than five years ago and more recently has developed carcinoma of the intestine. It is believed that one of her maternal aunts died of cancer.

Case 8, age 28, female. Since October, 1967, this patient has resided in a naval housing plat which is located about three quarters of a mile from the naval plat where patient 5 (onset 10/66) lived. Prior to living in military housing this patient lived for almost 8-9 months in civilian housing in North

Kingstown about one mile from the Davisville Construction Battalion Unit. It is of interest that this patient arrived in Rhode Island preceding the first onset of leukemia (patient three) in 1966. In March, 1969, the husband of patient eight was transferred to the Philadelphia area where follow-up will be continued.

In June, 1966, squamous cell carcinoma of the cervix was discovered incidentally in a routine examination for pelvic inflammatory disease, which has recurred many times since marriage at age 16. Pathology reports from the completion of a former partial hysterectomy (1961) performed in June, 1966, were negative. An examination in inguinal nodes in July, 1967, also yielded negative results. The patient delivered the last of her four children in September, 1964, shortly after her second marriage. She has had two abortions, presumably spontaneous, before 1964. Prior to the onset of leukemia in 6/68 patient 8 had been frequently using enamel paints with noxious odors. A maternal aunt of patient 8 died of cancer of the stomach; her paternal grandfather died recently of cancer of the prostate. The patient's mother was about 17 years old at the time of her conception.

Case 9, age 15, male. Patient nine moved into civilian housing just beyond the boundary line separating civilian property from the Davisville Construction Battalion Unit around the end of September or the beginning of October, 1966. Two cases of acute leukemia (patients three and four) had already occurred that year; the onset of Case 5 was in the early part of October, 1966. The fathers of patients five and nine were both in Antarctica in the latter part of 1966, but they were not in the same units, and as far as can be ascertained they did not know each other. In the early part of 1969 patient nine and family moved to another naval establishment in the United States.

Case 10, age 48, female. Patient 10 has resided in North Kingstown all of her life. She has been at the present address since 1966, which is about one half mile from the residences of patients 6, 7, and 13. There is, however, no known association between patient 10 and any of the other patients or the Navy. In 1966 she had herpes zoster. As a hobby she paints and in recent years she has used oil base paints. In the garden she uses commercial sprays and preparations. A maternal aunt is said to have died of cancer of the stomach in 1947.

Case 11, age 89, female. This patient lived at 2 different, successive residences on the same street

\$100,000

ESTATE \$233⁰⁰ FOR ONLY At age 30!

This plan is one of the lowest net-cost life insurance plans in America. Rates at other ages are equally phenomenal.

A level term policy written in minimums of \$100,000 (and no maximums), this plan is designed for the man who needs a larger amount of life insurance at the lowest possible cost.

The plan is written for ages 20 through 65, is renewable to age 70 and may be converted to a permanent plan prior to age 65 without a physical examination.

SBL

Security Benefit Life Insurance Company
700 Harrison, Topeka, Kansas 66603

Financial Security Corporation
Cumberland Professional Building
2180 Mendon Road
Cumberland, Rhode Island 02864
726-2371 726-2370

Please send additional information about your remarkable low-cost insurance plan.

Name

Address

City

State

Zip

Case 12, age 17, male. This patient had lived in a naval housing plat since March, 1966. This housing unit was located very close to the residence of patient 8 in the same plat for approximately 1½ years. Patient 12 lived in the plat about 6 months before the arrival of patient 8 and about 6 months after the departure of patient 8. The husband of patient 8 recalls giving patient 12 a ride to the base on at least one occasion. The mother of patient 12 and patient 8 were friends who socialized at each other's homes a number of times; most of this neighborly contact was limited to the latter part of 1966 and the early part of 1967. The sister of patient 12 (Sister X) did babysitting for the children of patient 8 at least 3-4 times before 1968. Patient 12, Sister X, and patient 9 were in eighth grade in 1966 at Wickford Junior High School; Sister X and patient 9 were in the same room together at that time for the first semester. Patient 12, Sister X, and Case 9 attended the North Kingstown Senior High School in grades 9 and 10 in 1967 and 1968, but all three children were in different home rooms. The husband of patient 8 and the father of patient 12 were both connected with the construction battalion in Davisville during their periods of residence in North Kingstown, but they were in different battalions and did not socialize.

Patient 12 worked as a mess attendant in the civilian cafeteria just before his onset of leukemia in the summer of 1969 and in the naval cafeteria after school and weekends in 1968. For years he has built and painted model cars using products containing toluene. Shortly after his gums began to bleed in early August, 1969, he helped paint a camper with an enamel paint. Apparently following this painting project, a cut in his mouth became infected and the sudden appearance of other symptoms led to the diagnosis of leukemia.

as poison ivy and treated internally and externally with hydrocortisone. Because of persistent facial edema a blood count was done in early November, 1969, which revealed leukemia. This patient had a severe attack of poison oak in California in early 1966. At that time he received only topical treatment with hydrocortisone. Later, he experienced several minor episodes of poison oak some of which did not require treatment. A paternal great uncle died of some form of metastatic cancer.

Case 14, age 37, male. This patient was asymptomatic at the time he moved to North Kingstown 2 months before his onset of leukemia in March, 1970. Prior to moving to North Kingstown he had lived in East Greenwich, Rhode Island, 2 months and 11 months (10/68-11/69) at Antarctica. He had resided in North Kingstown on 3 separate occasions since 1965: 7/65-10/65, 3/66-11/66, the time in which 3 of the 4 cases in the first leukemia interval were occurring, and 8/68-10/68. In 1968 he lived in a naval plat located across the street from another naval plat in which patient 8 and patient 12 were residing at that time. His address for the 1965 and 1966 periods was in the northern part of North Kingstown very close to

HEALTH HAVENS

NURSING HOME

A Participating Extended Care Facility In Federal Medicare



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail

East Providence

Tel. 438-4275

JCAH Accredited

the residence of patient 6 (onset 2/67) and patient 13 (onset 10/69).

During August and September, 1968, he had meetings with the father of patient 9 at least once a week concerning official matters relating to Antarctica Support Activities. This period of time coincides with the onset of leukemia in patient 9 (onset, 8/68). He thinks that he may have known the father of patient 5 (onset 10/66) because he helped to train the men who were sent to Antarctica that year. A check with the naval authorities has indicated that the father of patient 5 was a member of the particular construction battalion which underwent training in the early part of 1966 for deployment to Antarctica in 10/66. However, contact between patient 14 and the father of patient 5 was probably minimal.

This patient stated that he had contact with radioactive materials from 1962-1967 supposedly with proper precautions in his field of special weapons. He was the oldest of 4 children; his mother was age 14 at his conception and age 15 at his birth.

SUMMARY

A total of 14 cases of leukemia (10 acute, 4 chronic) have occurred in North Kingstown in a 11-year, 4 month period extending from January, 1959, through April, 1970. Nine cases of acute leukemia and 3 cases of chronic leukemia have been recorded since 1966; the paucity of cases in earlier years is probably related to the improved methods of case finding instituted in 1966. The occurrence of 8 cases of acute leukemia from 1965-1969 represents a highly significant statistical departure from the expected incidence for people under age 44; a comparison of observed and expected incidence adjusted for age based on Poisson distribution revealed that 8 cases of leukemia in ages 0-44 for the interval 1965-1969 would be expected to occur by chance only twice out of 100. The 9 recent cases of acute leukemia are also unusual for 3 additional reasons: the preponderance of acute leukemia in young people in a predominantly young community, the polarization of acute leukemia among naval personnel, and the discovery of various indirect associations among most of the cases. The latter suggests that inter-personal contacts of an indirect nature may have contributed to the epidemiologic pattern observed in both the naval and civilian populations in North Kingstown. Attack rates within the civilian and naval segments of the community have not been calculated because the census data do not distinguish

between the 2 distinct populations. However, various indices suggest that the Navy constitutes less than half the population of North Kingstown.

REFERENCES

- ¹R.I. Development Council: Community facts, 1966, 1969
- ³Commander, Naval Base, Newport: Annual report to stockholders. 1965, 1966, 1967
- ²Commander, Naval Base, Newport and Commander, Fleet Air, Quonset: Annual report by the Navy in the Rhode Island area. 1968
- ⁴HEATH CW Jr, HASTERLIK RJ: Leukemia among children in a suburban community. *Amer J Med* 34:796-812, Jun 63
- ⁵HEATH CW Jr, MANNING MD, ZELKOWITZ L: Case clusters in the occurrence of leukemia and congenital malformations. *Lancet* 2:136-137, 18 Jul 64

ACKNOWLEDGEMENTS

The authors wish to express their appreciation to the following whose enthusiastic cooperation and collaboration has made possible an effective surveillance and reporting system of leukemia in Rhode Island: participating Departments of Pathology, Medical Records, and Admissions, participating physicians, Dr. Joseph E. Cannon, Director, Department of Health, Mrs. Lera O'Hara, Chief Registrar, and Miss Ruth Clem, Senior Statistician, of the Bureau of Vital Statistics, the American Cancer Society, and Mrs. Kenneth Boehm of the Leukemia Society in Rhode Island. Credit is also extended to Michael Lipsky, medical illustrator, the Rhode Island Development Council, and the Public Relations at Quonset Point for technical assistance.

Special acknowledgement is due in the Department of the Navy to R. B. Brown, Vice Admiral, M.D., Surgeon General, Bureau of Medicine (1966) who granted permission through the usage of special protocols to include active patients from Navy hospitals in this study, J. L. Karrer, Lieutenant Commander and Head of Medical Records Information Branch (1964) and Captain Edward E. Hogan, Commanding Officer, Navy Hospital, Newport, Rhode Island (1964) who helped arrange for the use of medical records of Navy Personnel in the retrospective study, and the many associated naval personnel attached to the Navy hospitals in Newport, Quonset Point, Chelsea, San Diego, and Long Beach who contributed in various ways to this study. Of special note is Captain Sidney I. Brody, M.D., Commanding Officer, Navy Hospital, Quonset Point, who assisted in a special study.

Our thanks is extended to the following individuals who reported and collaborated in the investigation of cases discussed in this publication: Salvatore R. Allegra, M.D., Pathologist-In-Chief, Our Lady of Fatima and St. Joseph's Hospital; Joseph Hansagi, M.D., Pathologist-In-Chief, Kent County Memorial Hospital; T. Gordon Brown, D.O., Pathologist-In-Chief, Osteopathic General Hospital of Rhode Island; Thomas Micolonghi, M.D., Pathologist-In-Chief, South County Memorial Hospital; Godfrey Oakley, M.D., Communicable Disease Center, Captain Sidney I. Brody, M.D., Francis Wanat, M.D., Gary Mitchell, M.D., Robert Harrison, M.D., David Bizot, M.D., Reynold Larson, M.D., C. P. Mauri, M.D., Edward Freeman, M.D., John F. Caratti, M.D. and J. E. Lang, M.D. attached to the various Navy Hospitals and David E. Maglio, Jr., D.O.

We are especially grateful to Clark W. Heath, Jr., M.D., Chief, Leukemia Unit, Epidemiology Branch, Communicable Disease Center, for the statistical evaluation of data presented in this manuscript.

Credit is given to Livia Miller and Sharon Fallone for the preparation of this manuscript.

RHODE ISLAND MEDICAL JOURNAL

RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE

(Continued From Page 270)

Messrs. Albert E. Bonte, George W. Chaplin, and Charles V. McCaffrey.

The Board of Directors held eight meetings during the year with excellent attendance at every meeting. At its Annual Meeting on March 17, 1970, the Board named as officers of the Corporation the following: Dr. Arnold Porter, President; Dr. Earl J. Mara, Vice President; Judge Florence K. Murray, Secretary; and Mr. George W. Chaplin Treasurer. The Board also elected standing committees at this meeting, and it paid tribute to Drs. Waldo O. Hoey, John Turner, II, and Frederick C. Eckel for their contributions to the work of the Corporation during their terms as directors.

The very active Claims and Professional Advisory Committees furnished data on current operation problems which received careful review and action by the Board at each meeting.

While enrollment increased, and the 100 Plan and Major Medical coverage attained sizable enrollment also, the Claims and operating costs continued to rise, and thereby deplete the reserve funds. Yet the Corporation was able to avoid a rate increase filing for 1970.

The willingness of members of the Board to serve on committees to resolve day to day problems, the efficiency of the administrative staff, and the tremendous support of the participating physicians throughout Rhode Island continued to make Physicians Service one of the nation's foremost Blue Shield Plans.

Respectfully submitted:

JUDGE FLORENCE K. MURRAY

March 1971 Secretary

**RHODE ISLAND BLUE SHIELD
TREASURER'S REPORT
YEAR 1970**

During the year 1970, the Plan experienced a marked growth in income. Subscriber income amounted to \$18,468,000 and investment income reached \$396,000, both all-time highs. This income growth was attributable to several factors:

1. An acceptance by the general public of the Blue Shield "100" Program.
2. A continued interest and acceptance of the Major Medical Program.
3. An increase in the number of over age 65 people purchasing the Blue Cross-Blue Shield "65" Program.

(Continued on Next Page)

RELIEVE



**BACK
PROBLEMS**

Freeman

**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS**

HOME TRACTION

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

RHODE ISLAND BLUE SHIELD
FINANCIAL STATEMENTS AS OF DECEMBER 31, 1969 and 1970

| | Dec. 31, 1970 | Dec. 31, 1969 | Increase (Decrease) |
|---|----------------------|----------------------|------------------------|
| STATEMENT OF INCOME AND EXPENSE: | | | |
| INCOME: | | | |
| Received from Subscribers | \$18,467,604 | \$16,138,106 | \$2,329,498 |
| Income from Investments | 395,632 | 386,744 | 8,888 |
| TOTAL INCOME | \$18,863,236 | \$16,524,850 | \$2,338,386 |
| EXPENSES: | | | |
| Claims Payments | \$18,325,567 | \$16,141,641 | \$2,183,926 |
| Operating Expenses | 1,889,578 | 1,709,198 | 180,380 |
| TOTAL EXPENSES | \$20,215,145 | \$17,850,839 | \$2,364,306 |
| NET GAIN OR (LOSS) TO RESERVES | \$(1,351,909) | \$(1,325,989) | \$ (25,920) |
| COMPARATIVE BALANCE SHEET: | | | |
| ASSETS: | | | |
| Cash in Bank and on Hand | \$ 128,850 | \$ 573,711 | \$ (444,861) |
| Accounts Receivable | 1,032,414 | 1,350,465 | (318,051) |
| Investments | 7,005,894 | 7,197,510 | (191,616) |
| TOTAL ASSETS | \$ 8,167,158 | \$ 9,121,686 | \$ (954,528) |
| LIABILITIES: | | | |
| Accounts Payable | \$ 1,590,043 | \$ 1,715,756 | \$ (125,713) |
| Accrued for Claims | 4,227,295 | 3,733,682 | 493,613 |
| Unearned Subscriptions | 364,772 | 351,746 | 13,026 |
| Other Liabilities | 16,080 | 10,729 | 5,351 |
| TOTAL LIABILITIES | \$ 6,198,190 | \$ 5,811,913 | \$ 386,277 |
| RESERVES: | \$ 1,968,968 | \$ 3,309,773 | \$(1,340,805) |
| TOTAL LIABILITIES AND RESERVES | \$ 8,167,158 | \$ 9,121,686 | \$ (954,528) |
| DISTRIBUTION OF BLUE SHIELD DOLLAR: | | | |
| Claims Expense | .971 | .977 | (.006) |
| Operating Expense | .100 | .103 | (.003) |
| Added to Reserves | (.071) | (.080) | .009 |
| TOTAL SPENT | 1.000 | 1.000 | ... |

The Plan also experienced an all-time high pay-out for benefits to its subscribers. Payments for services increased \$2,184,000 to \$18,326,000. Again, this was chiefly due to the new Blue Shield "100" Program which increased payments by more than \$2,000,000. Benefit payments increased in other programs such as Major Medical and the "65" Program proportionately with the growth in contracts.

The administrative cost for the year amounted to \$1,890,000 for an increase of \$180,000 over the previous year. The increase is attributable to:

1. Substantial increase in number of Blue Shield cases paid (19 per cent).
2. Increased Major Medical, "65", and "100" Contracts.
3. Increased volume necessitated increased usage of computerized equipment to provide faster and more efficient service to subscribers and providers of service.

4. Continued economic inflationary spiral.

The effect of income and expense for the year resulted in a loss of \$1,352,000 which was taken from Plan reserves. Reserves, including the maternity liability,, now stand at \$2,764,000 or 1.77 months as compared with 2.98 months as of December 31, 1969. As of December 31, 1970, Rhode Island Blue Shield is in sound financial condition.

AUTO BURGLAR

ALARMS

\$7.95 up

CUSTOM

Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

RHODE ISLAND BLUE SHIELD
COMPARISON OF STATISTICS — YEARS 1969 and 1970

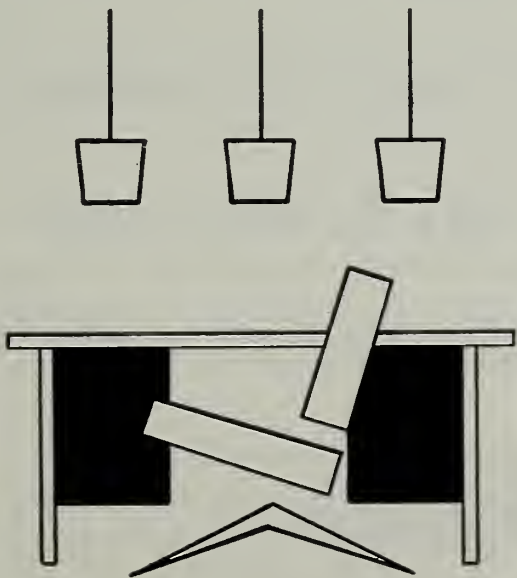
| | 1970 | 1969 | Increase (Decrease) |
|---|---------------|---------------|------------------------|
| Blue Shield Subscribers | 702,693 | 706,198 | (3,505) |
| People Served Under Government Programs | 99,170 | 99,000 | 170 |
| (Medicare Part B) | | | |
| People Served Under B/S Additional Programs | 461,709 | 392,890 | 68,819 |
| (Major Medical, Extended Benefits, F. E. Program) | | | |
| Firms With Blue Shield Coverage | 3,776 | 3,675 | 101 |
| Firms Buying Blue Shield For Employees | 3,054 | 2,912 | 142 |
| Benefit Payments, Blue Shield | \$ 18,325,567 | \$ 16,141,641 | \$ 2,183,926 |
| Benefit Payments, Federal Programs | \$ 9,296,699 | \$ 9,036,664 | \$ 260,035 |
| Total Benefit Payments | \$ 27,622,266 | \$ 25,178,305 | \$ 2,443,961 |
| Total Benefits Paid Since Start of Plan | \$200,352,092 | \$172,729,826 | \$27,622,266 |
| Total Assets | \$ 8,167,158 | \$ 9,121,686 | \$ (954,528) |
| Total Income | \$ 18,863,236 | \$ 16,524,850 | \$ 2,338,386 |
| Total Reserves | \$ 1,968,968 | \$ 3,309,773 | \$ (1,340,805) |
| Operating Expenses | \$ 1,889,578 | \$ 1,709,198 | \$ 180,380 |
| Number of Blue Shield Cases Paid | 809,598 | 678,841 | 130,757 |
| Number of Cases Paid (Incl. Medicare) | 1,101,653 | 954,617 | 147,036 |
| Number of Participating Physicians | 1,139 | 1,113 | 26 |



Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

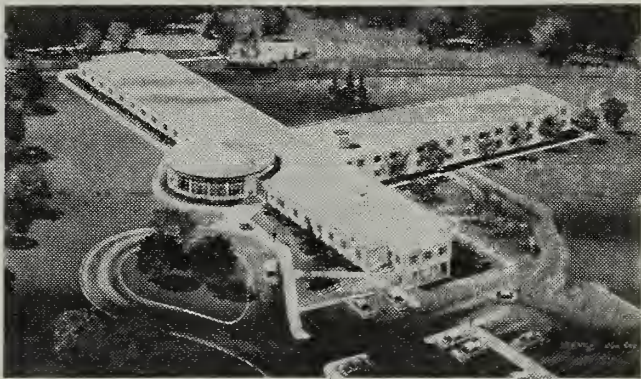
36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

**CEDAR CREST
NURSING CENTRE**

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

NARCOTIC REGISTRATION

(Continued From Page 243)

- 12 This item should be checked if the applicant's name or address appearing on the form is different from that on the last registration received from IRS or FDA. The applicant should make any necessary correction on the form where the name and address appear.
- 13 This item should be checked only if the applicant is a federal, state or local official.
- 15 This item has two parts, both of which must be answered by all applicants. The first asks whether the applicant is authorized to handle controlled substances in his state. The second asks whether the applicant has been convicted of a felony under state or federal law relating to controlled substances.
- 16 This item is to be completed only by applicants who are federal, state or local officials.



DERMAQUIZ ANSWER

(See Page 253)

LEFT, Herpes progenitalis. CENTER, Erythroplasia of Queyrat (Carcinoma in situ.) RIGHT, Condyloma acuminatum or soft wart. A virus disease, non-venereal, like the common wart. Improperly, also called venereal wart.



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

HOUSE OF DELEGATES

(Continued From Page 252)

lems on its hands as a result of the ban on cigarette advertising which goes into effect January 2, 1971, and that the first big headache was caused by the U. S. Communications Corporation's decision to accept liquor ads, and

Whereas, the U. S. Communications Corporation, owners of 5 ultra high frequency (UHF) channels, has decided to turn to these sources of revenue, and

Whereas, if this corporation proceeds with its plans to accept liquor advertisements, the action could open the floodgates for liquor commercials, first by local stations, and then on the national networks, therefore,

Be It Resolved, that this House of Delegates expresses strong opposition to the acceptance of the television advertising of alcohol, a substance potentially dangerous to the health and welfare of the individual, and the family, and

Be It Further Resolved, that a copy of the resolution be forwarded to the National Association of Broadcasters (NAB) and to U. S. Senator John O. Pastore.

Respectfully submitted:

HUGO TAUSSIG, M.D.
Chairman

HIGHWAY SAFETY COMMITTEE

Unsuccessful in its attempt last year, the Highway Safety Committee will try once again to lower the level of alcohol in the blood at which a driver is presumed to be under the influence of alcohol from 0.1 to 0.08. As you may know, Utah already has done this and we would like to be the second state to recognize that the presently accepted levels are unrealistic. All available evidence points to the conclusion that a 0.04 the driving ability of *all* persons is affected adversely to a measurable degree.

We read in the PROVIDENCE JOURNAL *that the* reason the bill last year was not reported out of committee was that there did not seem to be much interest in it on the part of the general public. (Cause to sit back and wonder.)

To manifest interest, this year we are now trying to arrange a public hearing for the bill and plan to stimulate as much interest as possible in the professional spheres (drivers' clubs, insurance companies, etc.) and the public sphere. Perhaps we will ask for authorization to run an informative

ad in the paper soliciting the public support which seemed to be lacking last year.

You have received literature concerning our thoughts on trying to develop facilities in the hospitals of our state which would enable interested authorities to cause blood levels of alcohol to be determined on those drivers and pedestrians after they cross the portal of entry into a hospital. This event now almost automatically for a variety of reasons confers immunity from blood alcohol testing on all hospitalized patients. Letters went out to all hospital administrators in an attempt to evaluate the degree of cooperation we might expect from them in this regard, and their replies were somewhat less than encouraging.

Respectfully submitted:

JOSEPH E. CARUOLO, M.D.
Chairman

NUTRITION AND METABOLISM

The Committee on Nutrition and Metabolism held a meeting in November at which Miss Giglio, Chief of the new Diet Counselling Service established by the state Nutrition Council with financial support from the Regional Medical Program agency, reported on the new program. She explained that the purpose of the agency would be to function on referrals from physicians and an attempt would be thereby made to help the physician in providing diet counselling on his recommendations.

The committee felt that this new program offers a worthwhile service to the community, and it recommends that it be approved by the state medical society.

Respectfully submitted:

JOHN A. ROQUE, M.D.
Chairman



ERRATUM

In the April issue of this Journal, Vol. 54, No. 4), the word *colostomy* was omitted from the article from the fifth line of the first paragraph on page 211 of the article, "Rectal Obstruction Due to Carcinoma of the Prostate", by John R. Stuart, M.D. and William S. Klutz, M.D. The sentence should read: "Fourteen cases required colostomy for relief of obstruction; of these a followup is repeated in only six (Table I)."

GENERAL MEETING OF THE RHODE ISLAND MEDICAL SOCIETY

(Concluded From Page 278)

First White House Conference on Aging and Chairman of the Medical Society's Committee on Aging. The new vice-president is on the staff of South County, St. Joseph's and Kent County Memorial Hospitals.

PRESIDENT ELECT IS PROVIDENCE INTERNIST

The current President of the Rhode Island Society of Internal Medicine, and President-elect of the Rhode Island Medical Society, Dr. Robert V. Lewis, is a 1939 graduate of Brown University and was awarded his doctorate degree in medicine from the University of Pennsylvania. Doctor Lewis did post graduate work at Rhode Island Hospital and Brown University as a Haffenreffer Research Fellow in Internal Medicine. Currently a member of the Board of Directors of Blue Shield, Doctor Lewis is a Diplomate of the American Board in Internal Medicine. He is a member of the House of Delegates of the Medical Society and a past member of the Executive Committee of the Providence Medical Association. Doctor Lewis is the past Chairman of the Publications Committee of the Medical Society which oversees the publication of the RHODE ISLAND MEDICAL JOURNAL.

Doctor Lewis is a staff member of the Rhode Island, Providence Lying-In, Butler, and Notre Dame Hospitals.

DR. JOHN P. GRADY RE-ELECTED TREASURER

A member of the House of Delegates of the Rhode Island Medical Society and former member of the Executive Committee of the Providence Medical Association, Doctor Grady received his early education in Pittsfield, Massachusetts. He was awarded a Bachelor of Science degree from Providence College and he was awarded his Doctor of Medicine degree from Georgetown University. He served internships at St. Francis Hospital in Hartford and then at St. Joseph's in Providence. Doctor Grady's residencies were served at Chapin Hospital and at Boston City Hospital.

The Cranston pediatrician is a member of the active staffs at Rhode Island Hospital and Providence Lying-In Hospital, in consulting staff at St. Joseph's and the courtesy staff at Roger Williams General Hospital.

A member of the New England Pediatrics Society, the Society's treasurer has served as President of St. Joseph's Hospital medical staff and Charles V. Chapin medical staff. He is past Chief of Pediatrics at Our Lady of Fatima Hospital.

SECRETARY IS RENAMED

Dr. Stephen J. Hoye, Chief of Surgery at Pawtucket Memorial Hospital, was re-elected secretary of the Medical Society for a sixth term. Doctor Hoye, a native of Michigan, was graduated from Dartmouth College and Harvard Medical School. He interned and served a residency at Peter Bent Brigham Hospital in Boston and later served as assistant Chief of Surgery at West Roxbury Veterans Hospital. In 1959, he moved to Pawtucket and he established an office for the practice of general surgery.

STANDING COMMITTEE CHAIRMAN

Renamed chairmen of the major standing committees elected by the House of Delegates are: Dr. Harold G. Calder of Providence, Library Committee; Dr. Kenneth Liffmann, Medical Economics; Dr. Robert P. Davis, Scientific Work and Annual Meeting.

Newly elected committee chairmen are: Dr. Carl F. DeLuca of Johnston, Public Laws Committee; Dr. John A. Dillon of Providence, Publications Committee, and Dr. Thomas J. Dolan of Providence, Committee on Industrial Health.



**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a **special message**.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, **now**, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

Tel: — 831-4833

Providence, Rhode Island

REMARKS OF BLUE CROSS EXECUTIVE DIRECTOR

(Concluded From Page 268)

curing disease and saving lives. Obviously, their concern for the ultimate in quality of care has outweighed cost considerations. We view prospective reimbursement as an ideal vehicle for striking a balance. We will take to the negotiating table a conviction that no matter how desirable some of the programs, justified in the name of quality of care, there comes a point where the public pocketbook is simply unable to support the strain.

By its very nature, then, prospective negotiation of hospital payment rates will set the cost concerns of Blue Cross, representing the people, against the quality of care concerns of health professionals, also sincerely representing the people in another sense.

While the process may be difficult, there is no question in our minds that the end result will be better control of costs, a healthier health care system, and a more balanced response to the people's true health care needs.

There is a possibility — and a relatively strong possibility — that the negotiating process won't be quite so difficult this year. It may well be, and it is sincerely hoped, that hospitals themselves share Blue Cross' conviction that prospective reimbursement has to be proved this year, and that on their own they will take a really get-tough attitude toward costs.

The prospective rating process has built into it a peer review mechanism of the Hospital Association, which requires all hospitals to submit budgets

for review by their colleagues before they come to Blue Cross. If the hospitals individually and collectively take a real hard line on costs, and if the resulting proposed increases are dramatically below previous years, it may well be that Blue Cross will find very little to quarrel with. Certainly we would welcome this kind of situation, and it would permit hospitals to stand very tall in the public arena.

PROBLEMS OF STATE REGULATION

I would make one final point about prospective rating, and that is that this new system bears importantly on the whole question of State regulation of Blue Cross rates and hospital costs. It is going to be very difficult for us to negotiate with hospitals, or for hospitals to make reasonable sacrifices in order to meet our cost demands, if the end result of the whole process is to be overturned by an illogical or irresponsible Blue Cross rate decision by the Department of Business Regulation. This problem is one of considerable concern, and we are currently giving serious attention to means of improving our relationship and mutual understanding with State government in terms of regulation.

It is going to be a critical year and an interesting one. As usual, our staff is confronted with more to do than it can possibly handle, and we are having our own difficulties in setting priorities and keeping a sense of balance. But we are encouraged by the progress that potentially can be made this coming year, and we are going to do our best to see that potential become fact.



EAST SIDE- MEDWAY STREET

Across street Wayland Square stores parking lot. New modern prestige brick 4 office suite medical building. Designed for doctors. Parking, private entrance and exit, air conditioned, paneled, carpeting, separate waiting and examination rooms.

231-7910

Multispecialty Medical Bldg.

has room and need for gastro-enterologist, dermatologist, psychiatrist, internist, pediatrician 100,000 population. Good schools, good recreation areas. University affiliated hospital. Hopefully this will be a multispecialty group practice within the next 2-3 years.

BLACKSTONE VALLEY MEDICAL BUILDING, INC.

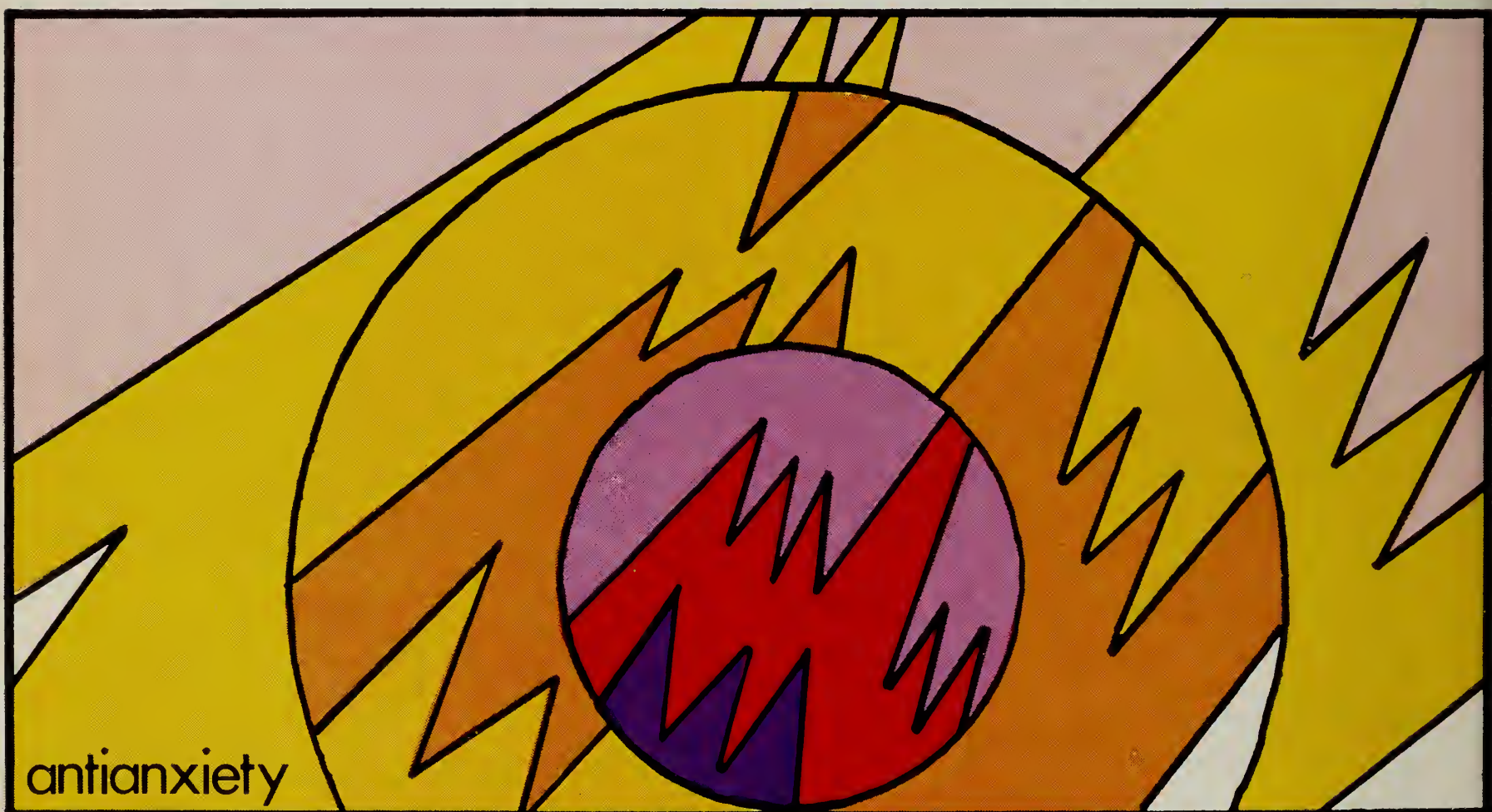
333 School St., Pawtucket, R. I.

722-2253

anxiety: a time bomb

Unless "defused," anxiety may build up to an intensity that can overwhelm the patient's inner defenses. Also, in one weakened by chronic illness or surgery, excessive anxiety may provoke or aggravate symptoms and interfere with recovery.

The antianxiety action of Librium (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in many fields of medical practice where anxiety complicates the patient's condition.



Librium® (chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules up to 100 mg daily for severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating ma-

chinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impend-

ing depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

RHODE island MEDICAL JOURNAL

| | |
|--|-----|
| IMPACT ON RHODE ISLAND OF A MEDICAL SCHOOL AT BROWN UNIVERSITY Richard P. Sexton, M.D. | 307 |
| MEDICAL CARE FOR TOMORROW Walter C. Bornemeier, M.D. | 310 |
| MOBILITY IN NURSING Thelma Ingles, R.N. | 313 |
| MEDEX: A REGIONAL EXPERIMENT Bella Strauss, M.D. | 316 |
| DEVELOPING PARAMEDICAL PROGRAMS IN RHODE ISLAND FOR HEALTH CARE MANPOWER NEEDS Heber W. Youngken, Jr., Ph.D. | 321 |
| EDITORIALS | 327 |
| HOUSE OF DELEGATES REPORT | 293 |
| 1971 REPORT OF THE WOMAN'S AUXILIARY TO RHODE ISLAND MEDICAL SOCIETY Mrs. John J. Cunningham | 304 |

EDITORIAL STAFF

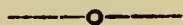
EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of March 24, 1971

A meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, March 24, 1971. The meeting was called to order by the Speaker of the House, Dr. John J. Cunningham, at 8:08 p.m.

ROLL CALL

The following members of the House were in attendance: Drs. John J. Cunningham, David Newhall, Robert E. Baute, John C. Osenkowski, Charles B. Round, Richard G. Bertini, David R. Hallmann, Earl J. Mara, James A. McGrath, Joseph L. C. Ruisi, Richard P. Sexton, Jeannette E. Vidal, William J. MacDonald, Stephen J. Hoyer, John P. Grady, Bertram H. Buxton, Jr., Erminio Cardi, Joseph Caruolo, Nathan Chaset, George V. Coleman, John A. Dillon, Joseph D. DiMase, Joseph L. Dowling, Jr., Herbert F. Hager, John B. Lawlor, Robert V. Lewis, Thomas R. Littleton, Vincent I. MacAndrew, Frank Merlino, James B. Moran, Gustavo A. Motta, Raul Nodarse, James A. Reeves, Robert P. Sarni, George H. Taft, Elihu S. Wing, Jr., Seebert J. Goldowsky, Edmund T. Hackman and Arnold Porter.

Also present were Mr. John E. Farrell, Executive Secretary; Edward J. Lynch, Assistant Executive Secretary, and Dr. P. Joseph Pesare, medical director of the State Public Assistance Program.

Members absent were: Drs. John C. Ham, Carl V. Anderson, Harold L. Beddoe, William J. O'Rourke, Charles S. Dotterer, Frederick Peirce, Jr., Robert Hayes, Paul J. M. Healey, F. Bruno Agnelli, Francis L. Scarpaci, Leonard S. Staudinger, J. Gerald Lamoureux, Stanley D. Simon, John T. Barrett, Francis P. Catanzaro, Dominic L. Copolino, Frank P. Duffy, Herbert Ebner, Martin E. Felder, David Freedman, Alvin G. Gendreau, Frank Giunta, Milton W. Hamolsky, Henry M. Litchman, Peter Mathieu, Anthony J. Migliaccio, Ralph F. Pike, William R. Thompson, and Joseph E. Cannon.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the previous meeting of the House had been prepared and distributed to the members.

Action: A motion was made, seconded, and voted that the minutes of the meeting of the House of Delegates held on January 20, 1971 be approved, as submitted.

REPORT OF THE SECRETARY

Dr. Stephen J. Hoyer, Secretary, noted that his report was published in the handbook for the meeting.

The Speaker commented on the plans for the annual meeting on April 24th, and urged the delegates to encourage the membership of their district societies to attend the meeting.

~~Doctor~~ Sexton spoke briefly on the meeting of the Council with the officials of Brown regarding the future of the medical school at the University.

The Executive Secretary, John E. Farrell, reviewed the plan of the State Health Department for the FLEX program for applicants for licensure in the healing art in Rhode Island. He explained how the basic science law would be repealed, and the chiropractic statutes amended. He noted that the Council had taken exception to action by the State Health Department in giving status to the National Board of Chiropractic Examiners under the chiropractice reciprocity statute, and he pointed out that no other national board is given legislative inclusion as an examining body.

Action: A motion was made, seconded, and voted that the House support and reaffirm the Council action in requesting that the provision proposed for recognition of the National Board of Chiropractic Examiners be deleted from the statute.

REPORT OF THE TREASURER

Dr. John P. Grady, Treasurer, read his report which was published in the handbook for the meeting.

(Continued on Page 300)

Guide his hand to quality and economy

Specify
Deltasone® 5 mg.
(prednisone, Upjohn)

**an economical
prednisone
that's made
a name for itself**

Upjohn
INC.

The Upjohn Company, Kalamazoo, Michigan 49001



...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distension and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or uri-

nary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Hopkins

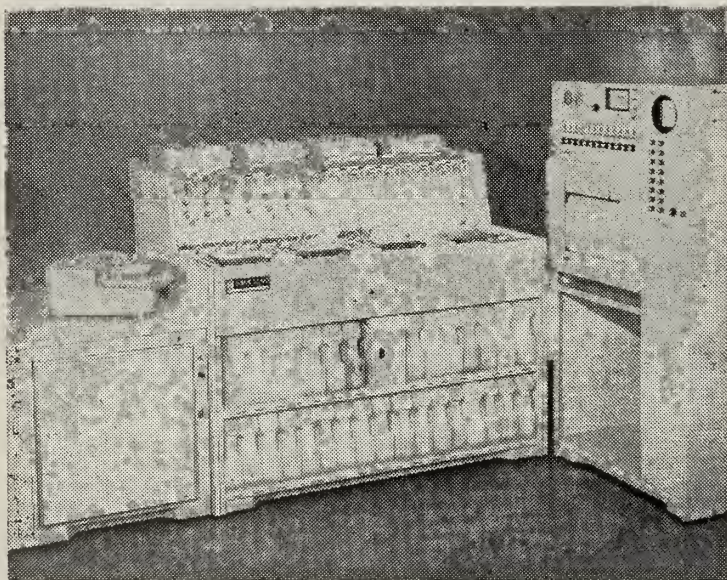
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

**ALL 20 PROCEDURES
\$15.00**



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

HOUSE OF DELEGATES REPORT

(Continued From Page 293)

Action: A motion was made, seconded, and voted that the report of the Treasurer, as submitted, be approved and placed on record.

RECOMMENDATION FROM THE COUNCIL

The Secretary reported that the Council had prepared a slate of nominees for Officers and Standing Committees as provided under the by-laws, and that it submitted the list for the consideration of the House. The slate was published in the handbook of the meeting. There were no counter nominations from the House.

Action: A motion was made, seconded, and voted that the slate of nominees for Officers and Standing Committees, for the term 1971, until the annual meeting in 1972, as submitted, be elected.

RESOLUTION FROM THE PROVIDENCE MEDICAL ASSOCIATION

The Secretary read a resolution received from the Executive Committee of the Providence Medical Association, and which had been published in the handbook for the meeting.

The resolution was discussed, and members of the House stated that there was little doubt that the abortion legislative issue would not be resolved this year, and therefore no action would be warranted by the House on the resolution.

REPORT FROM DR. P. JOSEPH PESARE

The Speaker recognized Dr. P. Joseph Pesare, a member of the Society, and medical director of the State Public Assistance Medical Programs.

Doctor Pesare related how he had appeared before the Senate Health and Welfare Committee of the General Assembly on March 16th to discuss the budget for medical aid for welfare beneficiaries. He stated he reported how physicians had rendered service gratis in in-patient cases and had accepted a \$3 office fee and a \$4 house call fee from the Department from 1952 until 1964 when the Kerr-Mills act provided federal aid, and then only for MAA beneficiaries. He also stated he had presented charts showing the tremendous free service — \$838,000 for one period — given by physicians. He reported how, after years of negotiation the increase in office fees had been made this year on the usual and customary fee basis, up to a minimum of \$10 which represents the rate prevailing in 1966.

He stated how he had answered a legislator's question on what are reasonable hospital costs by saying welfare must pay whatever the hospital

bill is under the federal-state matching programs, and he had commented that "In general, reasonable hospital charges are apparently whatever the traffic will bear."

The following morning the PROVIDENCE JOURNAL quoted him as making the comment about doctors' charges. He immediately called the newspapers and asked for a correction. The EVENING BULLETIN on March 17th stated in its metropolitan issue only, that "In this morning's JOURNAL it was incorrectly reported that reasonable doctors' fees, according to Doctor Pesare, are determined on the basis of 'whatever the traffic will bear'. The quotation inadvertently was taken out of context."

The Speaker expressed the thanks of the House to Doctor Pesare for his explanation of the news account of the Senate hearing.

* * *

Dr. Robert E. Baute read a letter which he had addressed to the Editor of the JOURNAL-BULLETIN regarding statements reported in those newspapers attributed to a state legislator that were critical of physicians.

MEDIATION COMMITTEE REPORT

Dr. Nathan Chaset reported briefly on the work of the Mediation Committee, and also stated that the Osteopathic Association had requested assistance from the committee to aid it in establishing a similar hearing body for alleged malpractice actions.

MENTAL HEALTH REPORT

Dr. Richard P. Sexton, President of the Society, reported that he had talked with Dr. Roswell Johnson who had assured him he would continue to serve on the drug subcommittee of the Mental Health Committee.

OTHER COMMITTEE REPORTS

The House voted to receive and place on record the reports of the following committees as published in the handbook for the meeting: Medical Aspect of Sports, Child-School Health, Continuing Medical Education, Disaster, Industrial Health, Library, Pollution, Public Laws, Scientific Work and Annual Meeting, and Mental Health.

GROUP HEALTH PROGRAMS

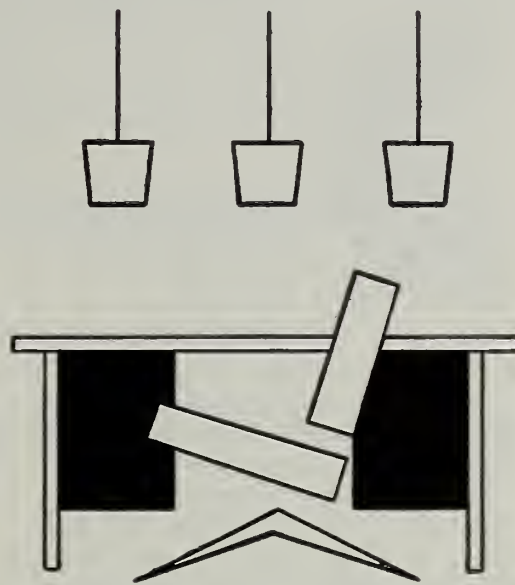
Doctor Nodarse asked about the Society's position regarding the developing group health programs in the State, and particularly the action of the Executive Committee of the Providence Medical Association which has recently named a study committee on the subject.

(Continued on Next Page)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



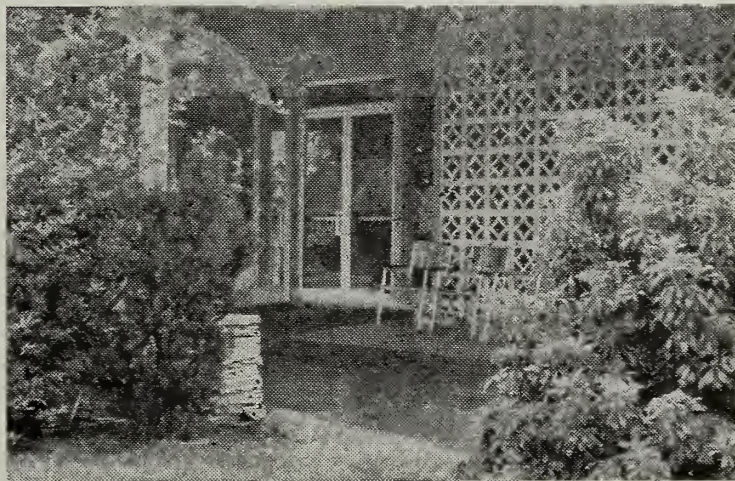
Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

HEALTH HAVENS NURSING HOME

A Participating Extended Care Facility
In Federal Medicare

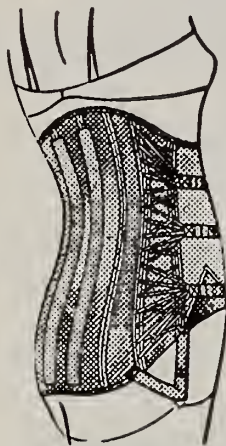


Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

RELIEVE



**BACK
PROBLEMS**

Freeman

**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION**

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

Dr. Joseph Caruolo, Vice President of the Association, stated that he was chairman of a new committee that has been named to consider various alternative methods for the delivery of medical care, including the Foundation approach that has been tested in some western states.

MEDICARE PAYMENTS

Several members of the House raised issues regarding payments under the Medicare program. The ruling that physicians visiting two or more patients in a nursing home will be paid at an office fee rate rather than a home visit, was subject to discussion, and concern was expressed that such regulations should not discourage medical service to patients in nursing homes, and at the same time some review of the situation might be undertaken by a committee of the Society.

The change in guidelines for physician payments from the 90th percentile to the 75th percentile, and the assignment rights under Medicare when the fiscal agent does not compensate on the basis of the usual and customary fee of the physicians came in for comment and discussion.

ADJOURNMENT

The meeting was adjourned by the Speaker at 9:45 p.m.

Respectfully submitted:

STEPHEN J. HOYE, M.D.

Secretary

REPORT OF THE SECRETARY

STEPHEN J. HOYE, M.D.

The following actions taken by the Council are reported:

1. The Council met with the President, the Provost, and the Director of the Department of Medical Sciences at Brown University for a discussion of the future of the Medical School at the University. (See report attached on "The Future of Med. Ed. at Brown".)
2. It approved of the appointment of Liaison Committee of the Society with a committee of Brown University to consider plans and policies in the development of the medical school proposal. The Committee named by Doctor Sexton consists of Drs. William J. MacDonald, Thomas Head, Robert V. Lewis, and Richard P. Sexton. The Committee named by Brown University consists of Drs. Robert P. Davis, Gary Paparo, Robert Parks, and Henry T. Randall. (Term of committee appointments were set for one year.)

(Continued on Page 303)

RHODE ISLAND MEDICAL JOURNAL

HOUSE OF DELEGATES REPORT

(Continued From Page 302)

3. It approved of a liaison committee with the Tri-State Regional Medical Program to consist of Drs. Stanley D. Simon, Chairman; George V. Coleman, John Strom, Melvin Hoffman, and Johannes Virks. (Term of appointment is one year.)
4. It approved of the naming of Dr. Gabriel Najera as the Society's representative on the State Drug Addiction Control Commission to succeed Dr. David Fish, who resigned.
5. It authorized the President to name representatives of the Society to attend a New York regional meeting, sponsored by the AMA Council on Environmental and Public Health, a meeting on Peer Review to be held in Chicago under AMA sponsorship, and delegates to attend the annual meetings of the appointment by the President of Dr. John Lathrop as one of three Society representatives on the Rhode Island Interagency Council on Smoking.
7. It was informed of approval by U. S. Senator John O. Pastore, and the National Association of Broadcasters, of the resolution, adopted by the House of Delegates in January relative to liquor advertising on television and radio.
8. It authorized the President to name a committee on bylaw revisions to consider, among other matters, the possibility of an intern-resident membership in view of the AMA Proposal to provide AMA membership to house officers.
9. It approved a minor investment change recommended by the Trust Department of the Industrial National Bank relating to the Society's invested funds.
10. It approved of the proposal of the state health department for legislation to eliminate the basic science act, to amend the medical licensure act to provide that applicants hereafter take the Federation Licensing Examination (FLEX), and that the chiropractic statutes be amended to require that applicants have the educational requirements now set forth in the state basic science act, and also that they take the basic science test of the FLEX program. But it strongly opposed a pro-

(Continued on Page 328)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

559-9

1971 Report Of The Woman's Auxiliary To The Rhode Island Medical Society

Annual Report Of President Highlights Many Useful Community Activities Of Auxiliary

By Mrs. John J. Cunningham

In Rhode Island this year our main concern has been directed to the recruitment of health manpower. We tried to isolate one or two aspects of this vast problem by making available to the non-college oriented students the many opportunities for training in the intermediate health services which are already or soon will be needed in such great numbers in the United States.

The most exciting project was being involved in a pilot program for the state of a three-year health careers curriculum for credit at a vocational high school. Speakers were recruited from the medical community and field trips arranged. School personnel agreed that it was a happy meeting of students who wanted to learn, of a community most willing to teach, and an auxiliary which was at the right place at the right time.

As a result of a news story about the program, many calls were received; some from professional groups offering help; many inquiries from young people, emphasizing the need for a health career information center. The groundwork has been laid; the medical library with the auxiliary is functioning as a source on a limited basis at present.

MRS. JOHN J. CUNNINGHAM of Pawtucket, R. I., President, 1970-71, *The Woman's Auxiliary to the Rhode Island Medical Society.*

Presented at the Annual Meeting of the Woman's Auxiliary to the Rhode Island Medical Society at the Colonial Hilton Inn, Newport, Rhode Island, May 4, 1971.

A key county auxiliary (Providence) was organized which involved the transfer of 110 members (to date) from an at-large status into a more viable, functioning group. This project was greatly aided by a grant from the Medical Society. We now have five organized counties.

AMA-ERF presented the "Miss AMA-ERF" pageant at our mid-winter meeting thus encouraging the sale of varied items; full page ads in the medical journal promoted contributions to medical schools. Part of the proceeds of the highly successful Greek "*Taverna*" night in November was also designated for AMA-ERF. This festive evening with its authentic foods and dancing provided not only a lively, pleasurable event but also the funding of a nursing scholarship and two in allied medical fields.

Drug Abuse programs were arranged with audiences ranging from Cub Scouts to professional health personnel at a large medical center; auxiliary members manned a trailer station during a "Stop Smoking" campaign in Rhode Island; co-sponsored with other interested groups, an "Anti-Air Pollution" bill at the state legislature; endorsed the Governor's campaign against teenage V.D. (Billboards reading, "Let's Get V.D." evoked a great deal of interest.)

Eye-screening programs for pre-school children have continued especially in our Woonsocket auxiliary. Approximately 500 youngsters have been tested in this relatively small area. Auditory testing has also been introduced at several schools.

Diabetic testing days were held in three areas of the state.

For our own members, a Workshop was held in November with the chairmen of committees presenting enthusiastic summaries of current projects. Mr. Edward Donelan of AMA discussed "Medi-credit" and other health plans in the offing. An interest-training questionnaire designed to be eye-catching was sent to members with dues notices this year providing most helpful information.

Our membership meetings proved to be varied, interesting, and well attended. In October a trip to picturesque Wickford with a tour of Smith's Castle and other points of interest, followed by luncheon at the Wickford Marina on a lively, crisp autumn day was quite delightful.

On February 9, about 149 members and guests enjoyed a luncheon and fashion show at the Jordan Marsh Community Room at the new Warwick Mall. A highlight was the "A.M.A.-E.R.F." pageant with talented members as participants.

The Annual Meeting was held at the Colonial Hilton Hotel on May 4th, on Goat Island in Newport. The large group attending viewed a hobby show of members' works. A marvelous collection of handicrafts was on display. National Constitutional Secretary, Mrs. Norman B. Gardner of Connecticut, brought greetings from the national board. The Executive Secretary of the Rhode Island Medical Society, John E. Farrell, was presented a special award in acknowledgement of his help to the Woman's Auxiliary over the years. The installation of officers for the year 1971-72 was held. Mrs. Alfred E. King of Woonsocket was installed as President.

Our very deep gratitude is extended to the outgoing officers and board. They all expended a great deal of time and effort in order to live up to the Auxiliary aims of helping the Medical Society and their doctor husbands in fields of health, and well-being in the community.

Woman's Auxiliary To The Rhode Island Medical Society Officers 1970-71—12 p caps (18)

President, Mrs. John J. Cunningham; President-Elect, Mrs. Alfred E. King; Vice-President, Mrs. Richard E. Noon; Recording Secretary, Mrs. Sumner I. Raphael; Corresponding Secretary, Mrs. Vincent DeConti Treasurer, Mrs. Donald Larkin; and Assistant Treasurer, Mrs. J. Robert Bowen.

BOARD OF DIRECTORS — Kent — Mrs. Edmund T. Hackman; Newport — Mrs. George T. VanPetten; Pawtucket — Mrs. Juan Medina; Woonsocket — Mrs. Alfred E. King; Washington — Mrs. Frederick C. Eckel; Bristol — Mrs. Nathaniel D. Robinson; and Providence — Mrs. William J. MacDonald.

APPOINTED OFFICERS — Historian, Mrs. Joseph C. Johnston; Parliamentarian, Mrs. Stanley D. Simon; and By-laws, Mrs. James O'Brien.

ADVISORY MEMBERS — Mrs. Thomas A. Egan and Mrs. Daniel G. Calenda.

National — Eastern Regional Chairman — Health Careers, Mrs. Thomas F. Head; Eastern Regional Chairman AMA-ERF, Mrs. Thomas A. Egan.

CHAIRMEN OF STANDING COMMITTEES — AMA-ERF, Mrs. Philip J. Lappin; Co-Chairman, Mrs. Daniel G. Calenda; Community Health, Mrs. John Coughlin. Children and Youth — Eye-Screening, Mrs. Alban LeBlanc; Auditory Testing, Mrs. Henri Gauthier.

Health Careers — Chairman, Mrs. Edward J. Damarjian; and Co-Chairman, Mrs. Michael E. Scala; International Health, Mrs. Charles A. Hall, Jr.; Legislation, Mrs. Harold Beddoe; and Mental Health, Mrs. Charles R. Hill.

Drug Abuse, Mrs. Daniel Calenda; Nominating Chairman, Mrs. Daniel Calenda; Program, Mrs. Charles B. Round; Co-Chairman, Mrs. Edward R. Maher; Publicity, Mrs. John Montgomery; Reports, Mrs. George H. Taft; Scholarship, Mrs. Herbert Hager; Membership, Mrs. James Yashar; Co-Chairman, Mrs. William Sammartino; and Safety and Disaster, Mrs. Ernest Dupre.



ONE SENTENCE ESSAY

They are the best physicians, who being great in learning most incline to the traditions of experience, or being distinguished in practice do not reject the methods and generalities of art.

. . . Sir Francis Bacon (1561-1626).

**Now
available for your
prescribing
needs**



Cordran[®] Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

PRESIDENTIAL ADDRESS

Impact On Rhode Island Of A Medical School At Brown University

State Financial Support For M.D. Program In Rhode Island Is Essential

By Richard P. Sexton, M.D.

One year ago I assumed the Presidency of the Rhode Island Medical Society at the 159th Annual Meeting held at Providence College. At that time, it sounded like an onerous job, time consuming, nerve racking, hazardous and rather frightening. This was before I really knew John E. Farrell. He is like a transfusion of Betz cells, for no problem that arises even appears difficult to him, as they have all been handled before. He appears to be a close personal friend of practically every doctor of note in the country, and in every major city in the country is a sports personality that John E. coached, managed or associated with at Providence College. Working with John has been a privilege and experience that made the year pass quickly and most enjoyably.

MANPOWER PROBLEMS

Early in the year, I was appointed to the Governor's Commission on Medical Manpower, which Committee was chaired by Dr. Pierre Galletti, who heads the Division of Biological and Medical Sciences at Brown University. Subsequently, a Liaison Committee has been established between the Rhode

RICHARD P. SEXTON, M.D., *immediate past President, Rhode Island Medical Society, Providence; Chief, Division of Plastic Surgery, Rhode Island Hospital, Providence.*

Presidential Address delivered at the 160th Annual Scientific Assembly of the Rhode Island Medical Society, at Providence, R. I., April 24, 1971.

Island Medical Society and Brown University in regard to medical education to the community, both public and medical, and at the same time to bring back to Brown the community reaction.

In the United States at this time, there are approximately 105 medical schools. All of these medical schools are of top quality thanks to the Flexner Report of 1910 which established standards. All are filled to capacity but they are not self-sustaining and are threatened with closure due to financial problems, despite State and Federal aid to many of them.

These schools are graduating approximately 10,000 students a year, and still there is a deficit of about 50,000 doctors in the country. It is estimated that 5 per cent of the medical profession retire or leave practice per year. This does not include those doctors who enter the academic field of teaching. The number of medical school applicants from Rhode Island has not kept pace with the national average. In fact, Rhode Island ranks near the bottom. The number of applicants will decrease steadily, because State supported medical schools are reluctant to accept out-of-state students.

RHODE ISLAND A DEBTOR STATE

Rhode Island is a debtor state in supplying doctors in this country. Of the college premedical students, only 11,000 are accepted into medical

(Continued on Next Page)

schools in this country. The remaining applicants must give up the idea of becoming doctors or apply to foreign medical schools. In 1969, 270 American students were admitted to medical schools in Mexico, another 175 matriculated in Italian medical schools, and a grand total of 743 Americans were admitted to foreign medical schools in Mexico, Spain, Italy, Switzerland and Belgium. It should also be noted that 50 per cent of the Americans who enter a foreign medical school do not complete their medical education there. Some of these students may qualify to transfer to an American medical school at the end of three or more years.

As a corollary to this sad situation, 65 per cent of the interns and 46 per cent of the residents in Rhode Island are graduates of foreign medical schools. One cannot necessarily imply that medical education abroad is inferior to a medical education in this country, but the implication is quite apparent if the foreign medical graduates are often the rejectees of American medical schools.

In nearly all the State sponsored medical schools there is a definite priority given to State residents — *and more* — a subsidy varying from \$1,500 to \$15,000 is given to the school by the State for each student. Hence, a Rhode Island student accepted at a State medical school elsewhere is not only occupying a premium spot, but cutting out a State subsidy to the school. His chances of acceptance in medical school are, therefore, very slim even if he were able to pay his own way.

Between 1965 and 1970, the State of Rhode Island licensed 400 physicians. Fifty-nine per cent of these were American graduates of American or Canadian medical schools. Forty-one per cent were graduates of foreign medical schools, and of these, 7 per cent were American graduates of foreign medical schools.

A MEDICAL SCHOOL IN RHODE ISLAND

The problem is acute, and it is going to get nothing but worse. How does a medical school at Brown University, granting an M.D. degree, influence this situation? Surveys show that a medical graduate is apt to establish practice in the state in which he receives his education. A resident doctor is even more desirous of practicing in the state in which he took his residency. Q.E.D., an M.D. degree granted in the State of Rhode Island will — in time — produce the doctors required in the State.

In this past year I have served on the Governor's Commission on Health Manpower, the Committee on the Role of the Center General Hospital, the Health Planning Council of Rhode Island, and I have sat in on meetings of the State Nurses' Association, the Medical Assistants' Association, and various county medical societies. At most of these meetings a medical school at Brown was discussed. Because of this a Liaison Committee has been established between Brown University and the Rhode Island Medical Society to keep the Society informed of the problems faced by Brown. The Medical Society can then pass on to its constituent county societies information and, in turn, bring back to the University the feelings of the medical community.

A. *Why at Brown University?*

1. Buildings and facilities are already in existence on the campus.
2. Professors and other personnel are already teaching at the present six-year Medical-Science Program.
3. Clinical professors have been appointed at various hospitals in Rhode Island in conjunction with appointments at Brown.
4. The pros and cons of a program granting an M.D. degree have been exhaustively studied, and the Executive Committee of the University has been presented with the problem.

B. *How will this come about?*

1. *Financing* — Brown University has said that a medical school would not, and could not, be financed by Brown. The State, Federal Government and the community must all be deeply involved in the financing of such an undertaking.

To what extent and in what manner has yet to be worked out? It is estimated that the cost of educating a medical student is \$15,000 per year. The needs must be clearly presented to the State Government, and the need for a subsidy to the school for each Rhode Island student attending. The Federal financing would need to be worked out, perhaps in outright grants.

C. *The result of a medical school in Rhode Island granting an M.D. degree:*

1. Rhode Island premedical students would have an improved chance of acceptance in an American medical school, since they would have a priority in a Rhode Island school. Probably at least 20 per cent would be from the State.
2. A medical school would attract superior men to teach in the program.

3. They, in turn, would attract top-quality interns and residents to various hospitals in the State. At this time, Rhode Island, Miriam, Roger Williams, Pawtucket Memorial and Providence Lying-In hospitals are Brown affiliated.
4. By the very presence of a medical school the quality of medical care would improve by the stimulus of the teaching program.

STATE COMMITMENT NECESSARY

It is unlikely that the spiraling cost of health care can be curbed, unless there is an adequate supply of physicians. The current situation can only be reversed by a clear declaration of intent by State authority to develop, by 1975, programs to train the medical personnel needed by the State. Coordination and financing may call for the establishment of a College of Health Sciences or Health Sciences Board operating under authority of a Board of Regents, or perhaps the Rhode Island Health Services Corporation (SEARCH).

From the community standpoint it would first be necessary to convince the doctors that a medical school would attract more doctors to the State and relieve their burden. The doctors, in turn, must persuade their patients and the general public that more doctors make their medical care easier to obtain. When a community is made aware of the importance of such a facility they will understand the need for a proposed bond issue — perhaps this year.

There are 75 approved internships in the State, and 65 per cent of these are, at present, occupied by graduates of foreign medical schools. Of 175 residency positions in the State, 46 per cent are occupied by foreign medical school graduates.

The impact of a medical school in Rhode Island would be to bring into the State medical educators of high quality. They, in turn, would attract interns and residents in all fields, hence improving postgraduate medical training. If, as statistics reveal, these postgraduate trainees remain in the State to practice after completing their training, they would tend to increase the number of practicing physicians in the State. The sum total of all this would be to reverse the shortage of doctors in the State.

Another expected bonus of a medical school in Rhode Island would be the increased interest it would generate in the high school students to enter medical and para medical fields. A quick look around the Rhode Island Hospital, or any of the

other hospitals in the State, at the number of people caring for patients, delivering food, messages, and patients, taking x-rays and doing laboratory tests, cleaning, repairing — and at other levels compiling, computing and distributing bills, gives some idea of the scope of ancillary personnel required to keep the health care field running — even though at times it may seem to be walking, plodding, or even stumbling. The stimulus of a medical school should entice high school students into many of these para medical fields. Consider also that, at this time, the number of premedical students in the State is approximately 50 per cent below the national norm.

The health care field in this country is BIG BUSINESS and with the various plans being presented by the President, members of Congress, Labor, the American Hospital Association, and the American Medical Association for comprehensive prepaid health care, it will soon, perhaps by 1975, be the country's largest business.

PROGRAM AT BROWN

President Hornig of Brown University is personally convinced of the need of granting an M.D. degree in Rhode Island. The trustees of the University are also similarly inclined, but Brown cannot afford to do this without financial help. It must be a commitment of the whole State and the community in general. At present, the students completing the six-year Medical-Science Program at Brown have been able to transfer to other medical schools in the country for the last two years of their medical education. It is no longer an easy matter to transfer from a two-year school to a four-year school. The two-year basic science medical school is going out of existence, probably within the next five years.

Countrywide it is acknowledged that medical education is too lengthy and must be shortened. This was pinpointed by the Carnegie Commission Report. The curriculum of the medical school is changing, and it is going to be very difficult, if not impossible, to place a two-year student into a four-year medical school because of this changing and variable curriculum.

The future of medical education at Brown presents the following choice of alternatives:

- a. To extend the scope of the Medical-Science Program to grant an M.D. degree in seven years.
- b. To modify the current six-year program so as to grant an M.D. degree in six years.

(Concluded on Page 337)

Medical Care For Tomorrow

Neighborhood Clinics Would Provide Quality Care For Both Rural And Urban Settings

By Walter C. Bornemeier, M.D.

One of the greatest problems today is the proper distribution of physicians.

In days gone by, 30 years ago, 40 years ago, a young physician starting in practice would look around for a neighborhood where there were no physicians or very few physicians and rent an office over a drug store.

True, there were specialists who congregated in the medical buildings and centers, but there were enough generalists and specialists who went where their service was, and is needed.

MALDISTRIBUTION

This is no longer true; doctors are busy enough so they do not need to make themselves easily available.

But the chief reason for congregating in medical centers is because the use of expensive equipment is today a part of medical practice. In fact, a doctor practicing alone can hardly afford the sophisticated equipment necessary to diagnose and treat illness the way he feels it should be done.

WALTER C. BORNEMEIER,, M.D., *President, American Medical Association, Chicago, Illinois.*

Presented at the 160th Annual Scientific Assembly of the Rhode Island Medical Society, Providence, R. I., April 24, 1971.

The practice of medicine is so complicated today that it takes a brave soul to venture into a general practice where the doctor is supposed to know everything about everything.

The result, more and more specialists congregating where equipment is available, where transportation is good and parking is easy and not expensive.

Along with this, the doctor's hours are more and more those of the business community — 8 to 5. What do people do after 5? They go to the only place where they know someone is available, the hospital emergency room. Last year 39 million patient visits were recorded in hospital outpatient facilities.

Is this the proper way for the medical profession to deliver medical care to the public? In many instances, care is given by doctors in training. In most cases, there is no time for adequate history taking or examination. Most of the time there is no follow up. Certainly there is no record of a patient's previous illness and a list of medications being used. On these and other counts, emergency room care for the average non-emergency illness is inadequate. What can be done to improve this situation? Also what can be done to make good medical care available in the neighborhoods that

are not near the medical center, or for people who have no automobiles, or for the mother of a family when father needs the family car to go to his job?

SOLUTIONS

Certainly there are solutions. The day of the solo practitioner over the drug store will never return because the doctor there cannot afford the costly equipment necessary to do a good job — and every doctor wants to practice good medicine. Will the doctor return to the residential area if other doctors come with him in an arrangement where equipment for diagnosis and treatment can be readily available. I think he will.

Would such a facility answer the need for medical care and relieve the hospital outpatient department of its heavy patient load of people who need a general physician, not a general hospital? It could do this if properly utilized.

Where will we get physicians who will practice in this manner? The answer to this one is easy. The output of physicians is increasing rapidly. The medical schools in Illinois, in Indiana, in Iowa, and in many other states are doubling their enrollment. The curriculum is being shortened. By the end of this decade, our medical schools will be graduating 20,000 physicians per year, compared to about 10,000 today. A survey of medical schools in Illinois last year revealed that 85 per cent of the students will opt for group practice.

GROUP PRACTICE

Doctors today are finding the necessity of more and more special equipment and help from allied personnel. Doctors need help with record keeping and business administration. The answer to all of these requirements is group practice. During the past decade group practice has increased four fold. If this keeps up, by 1980 we should have three-fifths of our doctors practicing in groups. I predict it will be for more than that.

Where will these health care facilities be located? If the facility is a self contained, fully equipped multi-specialty provider of medical care, it will not need to be in the shopping center, or the medical center. It can be in the neighborhood. Will all groups be located in residential areas? Obviously not. Some will be adjacent to, or even purchase space from neighborhood hospitals. Some will be located in shopping centers where people congregate.

Some will be highly specialized. Some groups will be single specialty, and probably these will be located within or adjacent to a well equipped hospital. Will every physician be a part of a group?

There are some specialties that can serve more people by serving several groups. An ophthalmologist, since his equipment is useful only to him, may want to practice alone. Every group could not use a pediatric cardiologist. Also a great many of us who have been solo practitioners for years may elect to practice alone, or in a building that has diagnostic equipment and services available.

NEIGHBORHOOD CLINICS

What hours of service will be provided by these neighborhood clinics? With a thirty or forty man clinic, there is no reason why service cannot be available from daylight to dark with a person on duty all of the time. Junior physicians could take their turn for night duty — for here might be a good use for a retired army medic who wants to stay in the business after retiring from service. Especially in neighborhoods where there is a tendency to violence, a six-foot-five-inch ex-sergeant might be the one to answer the night bell. With such an arrangement, people who need medical care at night would go to the facility where they are accustomed to get medical care. Their records would be there and readily available, and the night physician could call the member of the group who knows the patient, if necessary. For those who are in need of hospitalization, a member of the group could meet the patient at the hospital.

The medical clinic would be the general practitioner for the neighborhood. We would be back where we started, medical care within walking distance of many, readily available for all. What about the rural areas? Where will they get the care that they need? A recent survey in Iowa revealed that almost no one was farther than twenty minutes from medical care. But even twenty minutes is too far for a person badly injured. It is too long for a worried mother who wonders what to do if her children need care in a hurry.

CHANGES IN RURAL PRACTICE

The day of the rural practitioner at the crossroads town will probably never return. He will not be happy without adequate facilities and equipment and someone to take over when he goes for continuing education, or for a vacation. No doctor wants to practice poor medicine, and few solo practitioners are able to afford the equipment needed to do the things that he wants done. So he moves to the county seat, or joins a group in the city. The answer for a rural town is for the group practice in the county seat to establish a branch clinic, or spot where they can send a doctor several days

(Continued on Next Page)

a week, or more days if needed. A local nurse could man the facility and be available on call for emergencies. She can do an electrocardiogram and transmit it by phone to the center. She can call an ambulance or helicopter when needed. She can be involved in decision making far more than is the custom today.

How can these group clinics which are spread across the big and small cities in every population area fit into the picture of education of our young doctors? A recent survey in the *NEW ENGLAND JOURNAL OF MEDICINE* shows that, of any one thousand people in any given month, two hundred fifty saw a doctor, nine were hospitalized, and one was sent to a university medical center.

THE COMMUNITY HOSPITAL

Then why do we train our interns and residents chiefly in a medical center where only one of a thousand people go? More should be trained at the community hospital where nine out of a thousand go, or nine out of two hundred fifty that are sick. Better yet, why not give them part of their training where all of the two hundred fifty who see a doctor appear for diagnosis and treatment? After graduation from medical school, and after a residency of two or three years, each trainee could benefit by at least one year of apprenticeship with a group practice or a solo practitioner who is expert in the trainee's chosen specialty. This should be a requirement for speciality board eligibility and for entering practice.

I have painted a picture. How do we make the picture come alive. It will take a bit of doing, but maybe it will be easy.. Group practice is increasing rapidly. Most of the bills now being introduced into Congress contain provision for practice by groups. When all of the bills finally get to the Ways and Means Committee, it is logical to assume that this committee will need to take a good look at this method of delivery which is mentioned so frequently and praised so highly.

Across the country, medical associations are giving consideration to creation of foundations which can accept funds to provide care in undersupplied areas or to monitor the practice of medicine to increase efficiency.

INFANT MORTALITY

A final subject that needs attention is infant mortality. Statistics show that the United States ranks far below many countries in this regard. It is true that the method of arriving at the figures varies greatly. If all countries used similar methods of calculation, the United States would

improve its position. But the important point is the baby, not the position of the United States on the statistical ladder. We must do everything possible to cure the conditions that cause infant death. In the past two decades the infant mortality in this country has been reduced from 47 per 1,000 to 20 per 1,000. But the infant death rate in the deprived areas is still far too high.

The causes are poor nutrition, high incidence of teenage pregnancy and illegitimacy, unwanted babies causing expectant mothers to refuse prenatal care, poverty, lack of available care, and a host of other social conditions that prevent a baby from being born healthy and at term. Our obstetricians are to be congratulated for saving as many as they do, but the morbidity is high when babies are not born well and do not develop normally. Many of these individuals may never reach their full potential. The social conditions over which the physician has had no control are a barrier to improvement.

FOUNDATION CENTERS

If no one else will correct these situations the physicians must be given control of the social conditions. A foundation created by the local medical society, possibly with the health department could accept and manage funds to accomplish these aims. Federal agencies that are responsible for funds in the maternal and child area should make funds available for the establishment of a maternity center in every appropriate population center in deprived areas. These centers should be within walking distance for most people. The facility should be staffed with: physicians; nurses to help with delivery of babies; outreach people to comb the neighborhood to contact the pregnant girls and women.

In some cases, visiting nurses should bring at least some prenatal care to the mother who has no one to baby-sit with her family. The center should be capable of holding classes in family planning. Sex education classes could be taught for teenagers and even 10-year-olds. The center should be equipped to deliver those patients who are expected to deliver normally. With today's early ambulation, mothers can be sent home early, and visiting nurses be sent for followup. Nutrition must have attention. A pregnant woman who lives on sweetrolls and candy bars cannot beget a normal child, all she gets is fat and eclampsia. Additional food stamps must be provided where indicated. And someone must check to be sure good protein food is used properly.

(Concluded on Page 338)

RHODE ISLAND MEDICAL JOURNAL

Mobility In Nursing

Recommends Program Which Would Expand Role Of Nurses In Primary Health Care

By Thelma Ingles, R.N.

With the development of a national health philosophy and a new system for the delivery of health services, more and more emphasis will undoubtedly be placed on the prevention of disease and promotion of health, because these are the most plausible and humane approaches in the effective and economic delivery of care. An obvious example of the fruitful results of prevention can be seen in pediatrics, where the hospitalization of children has decreased so dramatically in recent years.

Historically, the majority of medical and nursing schools have been primarily concerned with preparing professionals to care for the sick. Acute illness has been viewed as the immediate emergency, as well as the most heroic and exciting form of practice. The care of patients with acute disease requires precise knowledge and specific skills. With scientific progress and greater understanding of the complexities of both normal and abnormal physiology, narrower and narrower specialization has seemed a manifest necessity. Specialists through research and practice have made enormous con-

tributions to the understanding of the etiology and management of diseases.

Realistically, however, a high percentage of patients who seek care, and need care, do not require the exact knowledge of specialists, nor do they need to be admitted to hospitals where specialists often find it most convenient to practice, and where costs are unavoidably high.

Routine physical examinations, preventive care, health education, health counseling, normal maternity service, treatment of minor health problems, supportive care of patients with long-term illnesses, and care of the aged might well be offered by another category of personnel and in facilities other than medical centers. Community health centers, and group practice for those who can afford it, will play central roles in the future care of people. If the prevention of disease and promotion of health are in fact to be key functions in the delivery of health services, it would seem logical and feasible to develop a new kind of general practitioner and to establish programs for their education.

LIMITATIONS OF DEGREE PROGRAMS

During the past forty years many able and intelligent nurses with baccalaureate degrees have become dissatisfied with the limitations of their education and practice and have gone on for study at the masters' and doctoral levels. Unfortunately, this additional education has not always been

(Continued on Next Page)

THELMA INGLES, R.N., *Consultant on Nursing, Rockefeller Foundation: Formerly, Chairman Medical and Surgical Nursing, Duke University School of Nursing, Durham, North Carolina.*

Presented at the 160th Scientific Assembly of the Rhode Island Medical Society, Providence, R. I., April 24 1971.

acknowledged as the preparation necessary for greater license in patient care, either by nurses themselves or by physicians. The concept of diagnosis, for example, has been seen as the unique right of the physician, despite the fact that nurses have always contributed to the fund of knowledge that makes diagnosis possible. Furthermore, nurses' judgments in the evaluation of ongoing treatment regimes have not universally been accepted by their medical colleagues as useful contributions.

Prestige in any profession is notably influenced by two components — income and the right to make decisions. Nurses have received low scores on both. Today, nurses with five or six years of formal and expensive education are eligible to receive between \$8,000 to \$15,000, whereas the newly created physician's assistants with two years of education, or even less, can earn between \$10,000 to \$18,000. One does not have to be a member of Women's Lib to question the justice of this decision..

Nurses who have achieved doctorates have in large measure taken their advanced education in the fields of education, biological sciences, or the social sciences. These peripheral disciplines have enriched nurses' general knowledge and permitted them to compete in the academic marketplace. They have not, however, in my opinion, prepared them to make their optimum contribution to, or a substantial impact on, the present delivery of health services, nor does the present structure permit their absorption in a constructive way.

EXPANDED ROLE

I believe it would be possible to set up an educational pattern which would expand the role of nurses with demonstrated ability and motivation, and prepare them to function effectively and legitimately in primary health care. This program could be set up for baccalaureate graduates and be completed in three years (27 months) — one year more than most present master's and one year less than doctorates. The specific background of nurses from university programs would serve as a sound background for advanced study, study which could prepare them to meet the realistic health needs of present-day society and to fill the gap left by the vanishing general practitioners. This program could lead to a new type of degree — such as a doctorate in community health. It would be a pity at this time to get hung up on issues of professional identity, for in truth this program would be a multi-disciplinary enterprise,

focusing on the preparation of qualified individuals for primary health care.

By fulfilling necessary prerequisites, members of other disciplines, such as social workers, physical therapists, dietitians, physicians' assistants, biology or social science majors, and others, would also be eligible for admission. The program might well serve as a situation where these people could meet on common ground.

This is not the time, nor the place, nor am I the person, to suggest in detail a curriculum. However, it might be useful for me to offer some general ideas.

The first year would be devoted to increasing the students' understanding of the psycho-social basis of community health and provide practical experiences in a variety of community settings. The objectives would be to increase the students' understanding of the existing social and ecological problems which influence the state of wellness, to help them become familiar with the agencies set up to protect and maintain health, and to the economics involved in ongoing programs.

The second year would build upon the foundation in the biological sciences laid in undergraduate programs, expand the students' knowledge of methods for promoting health, and extend their understanding of the physiological alterations produced by disease. Emphasis would be on physical assessment, and the recognition of the signs and symptoms of both normal and abnormal physiology.

The third year would offer an elective in a broad clinical area and provide experiences in either internal medicine, pediatrics, geriatrics, psychiatry, or obstetrics.

RESIDENCY

Upon completion of the formal program graduates could take a one-year paid residency in the chosen clinical area, either in a community health center, selected group practice, or a regional rural hospital. Following this experience they would be qualified to give primary health care and prepared to recognize patients with serious health problems who need referral to specialists in medical centers where complex diagnostic and therapeutic schedules could be carried out. An appropriate referral system both to and from the specialists would be essential for the success of this system.

I think it would be possible for community health centers to have observational wards where patients with circumscribed health problems could receive short-term care. Furthermore, if having a

baby is for most women a normal process, health centers might well offer total maternity care for patients with uncomplicated pregnancies. Mrs. Eva Reese, Director of the New York City Visiting Nurse Service, has suggested that community health centers are the logical places for normal maternity care, as well as for all aspects of family planning.

This program which I am suggesting in no way negates the role of the nurse practitioner. In fact, I believe that more and more nurse practitioners will be needed for community health centers, group practice, and medical centers. However, I do believe that it would be possible to prepare nurse practitioners at the undergraduate level. With some restructuring of the curriculum, the fourth year might well be spent in the study of a broad clinical elective — medical nursing, surgical nursing, pediatric nursing, psychiatric nursing, or nurse-midwifery — and prepare students to function effectively as nurse practitioners in the area of choice. In general most baccalaureate programs today give students a little about a lot; it might be better if students graduated with a lot about a little. Qualified nurses from two- and three-year nursing schools could apply for admission to these programs and by fulfilling necessary requirements graduate as bona fide nurse practitioners.

SPECIALIZATION

Future programs offering masters' degrees in nursing might well concentrate on preparing nurses for narrower specialization — cardiac nursing, orthopedic nursing, neurological nursing, and so on, and prepare nurses to work as true colleagues with medical specialists and thus improve the care of patients with major health problems.

Nor does this suggested program negate the need for physicians' assistants. As nurse practitioners will continue to need the assistance of general nurses, so physicians will need the support of physicians' assistants.

NURSE PRACTITIONERS

The point of departure for any new system for the delivery of health services must be based on the question, "What will it offer, and how will it help?" This is how I see this system:

First, the community health practitioners would be prepared through a sound educational program to meet the routine health needs of families in a direct and personal way, and to be actively con-

cerned with the social and ecological problems which predispose to ill health. Their background would prepare them to make judgments based on knowledge, and to refer patients with acute problems to specialists.

Secondly, this program would open up an avenue for progress to nurses and other members of the health professions and allied health professions, and would channel able and ambitious individuals into advanced study directly concerned with health care.

Lastly, I believe this suggested educational pattern would permit the efficient utilization of the various health professionals, patient care would be improved for all levels of society, and the costs could be tolerated, both by individual patients capable of paying their own way, and by the government for patients incapable of meeting the costs of staying well, or being ill.

In trying to meet the increasing demands for health care, we have been too willing to substitute quantity for quality. Two poorly-prepared individuals rarely add up to one well-prepared person. We do need Indians — but without a proper balance of chiefs, there can never be an efficient or effective service.

Perhaps in no other field has a little knowledge more potential for danger than in health care. Nurse aides and practical nurses cannot and must not be seen as replacements for nurses, nor can physician assistants be seen as replacements for physicians. They are supplementary staff.



ONE STORY BUILDING

20 ft. frontage by 39 ft.

Location: 2077 Mineral Spring Avenue, Centredale
Busy, built-up residential and business area.

No parking restrictions. Will remodel to suit tenant.

Call: Mr. Alfred Gabriel
CE 1-7277

2079 Mineral Spring Avenue
Centredale, Rhode Island

MEDEX: A Regional Experiment

Dartmouth Program Is Aimed At Training Physicians' Assistants To Relieve Manpower Shortage

By Bella Strauss, M.D.

The number of physicians graduated from medical school increases each year, and, even as this occurs, it becomes ever clearer that simple numerical enhancement of the ranks of practicing physicians fails to influence the growing disparity between their numbers in urban areas and their paucity in rural America. For the movement and the concentration of physicians continue to be centripetal with respect to population and urban locus. The parabola of this distribution inscribes a skewed curve; the skewing is a function of two overriding and equipotent considerations: the orientation of medicine toward specialty practice and the impress upon professional people of the desirable aspects of the culture of cities.

ORIGINS OF MEDEX

These are the facts. Undisputed, they have grave predictive value. Doctor Eugene Stead was among the first, starting some years ago, who sought to qualify these facts. The formal details of his effort,

BELLA STRAUSS, M.D., *Associate Professor of Medicine, Dartmouth Medical School; Deputy Director, MEDEX Program, Dartmouth Medical School, Hanover, New Hampshire.*

Presented at the 160th Scientific Assembly of the Rhode Island Medical Society, Providence, R. I., April 24, 1971.

the Duke Physician Assistant Program, are well known. The impetus he has given to others who share his concern, and the interest he has maintained in improving *access* to medical care, have been expressed in diverse constructive modalities; indeed, today there are more than one-hundred-and-fifty physician multiplier programs operational throughout the United States; a significant number of these owe authorship in part at least to Doctor Stead. And it is a tribute to him that these efforts have not mimicked in kind the Duke template; rather they have developed along lines dictated by individual circumstance, regional resources, and unique demands. One among the host of experimental programs is MEDEX, a project which spans geographically the entire United States. Its sites are five in number: Seattle, Washington (the original MEDEX site, as developed by Doctor Richard A. Smith); Los Angeles, California; Grand Forks, North Dakota; Birmingham, Alabama; and Hanover, New Hampshire. It is the MEDEX-New England program at Dartmouth Medical Center in Hanover, New Hampshire, that I shall describe in this paper. While the sites are five in number, they are quintuplicate only in the narrow sense. Each draws its applicants from the pool of medical corpsmen who have satisfied their military commit-

ment, each matches the Medex with a primary physician who serves as his preceptor, and each has a medical center based curriculum followed by a field apprenticeship in the community of the preceptor.

MEDEX — NEW ENGLAND

MEDEX-New England is a physician-oriented experimental training program utilizing the skills of ex-military corpsmen and medics in the civilian sphere. Its aim, in common with other programs in the field, is to relieve the critical shortage of trained manpower in health care and the deficiencies attendant upon that shortage. Additionally, its goals are to increase the productivity of primary physicians, to provide them with skilled assistants (Medex), who have been trained to help them refine the quality of that productivity, to enhance access to medical care, and to improve the efficiency of delivery of physician services.

To meet these goals MEDEX-New England, funded by a Federal Grant from the Research and Development Division, Department of Health, Education and Welfare, got under way just nine months ago; today, MEDEX class I is in the field. In November, 1970, from a potential preceptor pool numbering approximately one hundred, twenty-three physicians from four states were chosen through their respective state medical societies: eleven in New Hampshire, five in Vermont, four in Maine, and three in Massachusetts. The geographic distribution of the twenty-three preceptor sites in four New England states is illustrated in the accompanying line drawing (Figure I). It should be emphasized that a multistate preceptor representation was from the outset sought by the MEDEX-New England Staff. Realization of this goal represented the culmination of extended negotiations among the principals: the medical societies, the individual physicians, and the MEDEX Project. Indeed, the resultant tenor of MEDEX-New England has become one of its important strengths, especially as that tenor has been a force in the molding of an emerging regional model legislation.

Of the twenty-three preceptors in the Program all characterize themselves as primary physicians, although four hold specialty certification in surgery (one), internal medicine (two), and orthopedic surgery (one). With four exceptions the preceptors practice in rural and remote areas. As a group they strongly support the research, or experimental character of the MEDEX Project;



they have agreed to endure repetitive intrusion into their practices at the discretion of the Project for the express purpose of making those practice measurements and obtaining those data which will permit evaluation of the impact of MEDEX.

The preceptor occupies the pivotal position in this experimental program; he relates importantly both to the effort at Dartmouth Medical School, where he influences the shape and substance of the MEDEX curriculum, and he relates crucially to the MEDEX effort at the community level. Indeed, it is the sensitivity and guidance of the preceptor as he introduces the Medex to the environment of the community hospital, to the pharmacist, to the nursing profession, and to the myriad tangential paraprofessionals and lay persons who make up the world of the Medex, which effect the translation of MEDEX from theoretical premise to operational reality.

THE FIRST CLASS

The twenty-three Medex who make up the first class were chosen from a pool numbering several hundred. In the class are representatives from all branches of the armed services. Of the twenty-three, fifteen call New England home, three come from other points on the eastern seaboard, and five

(Continued on Next Page)

are from the middle west. It is anticipated that the preponderance of native New Englanders in the program will contribute to its stability. MEDEX-New England has attracted to it a large number of applicants who have come from its cultural terrain and are drawn back to it for the cogent reason that it is "home". In fact, acceptance of the MEDEX concept in ethnocentric New England may be predicated in considerable part upon the fact that the Medex is *not* an outlander; and so it may be that a prophet does indeed have honor in his own land. The home states of the twenty-three Medex of the first class are identified in Figure II.

Following identification of preceptors and selection of Medex, a complex matching process ensued; a recital of the specifics need not be detailed here. The important point is that from the first day, as the curriculum got under way, each Medex knew precisely where his future career lay, geographically, and with whom.

The Medex training program is biphasic: Phase I encompasses three months of formal didactic

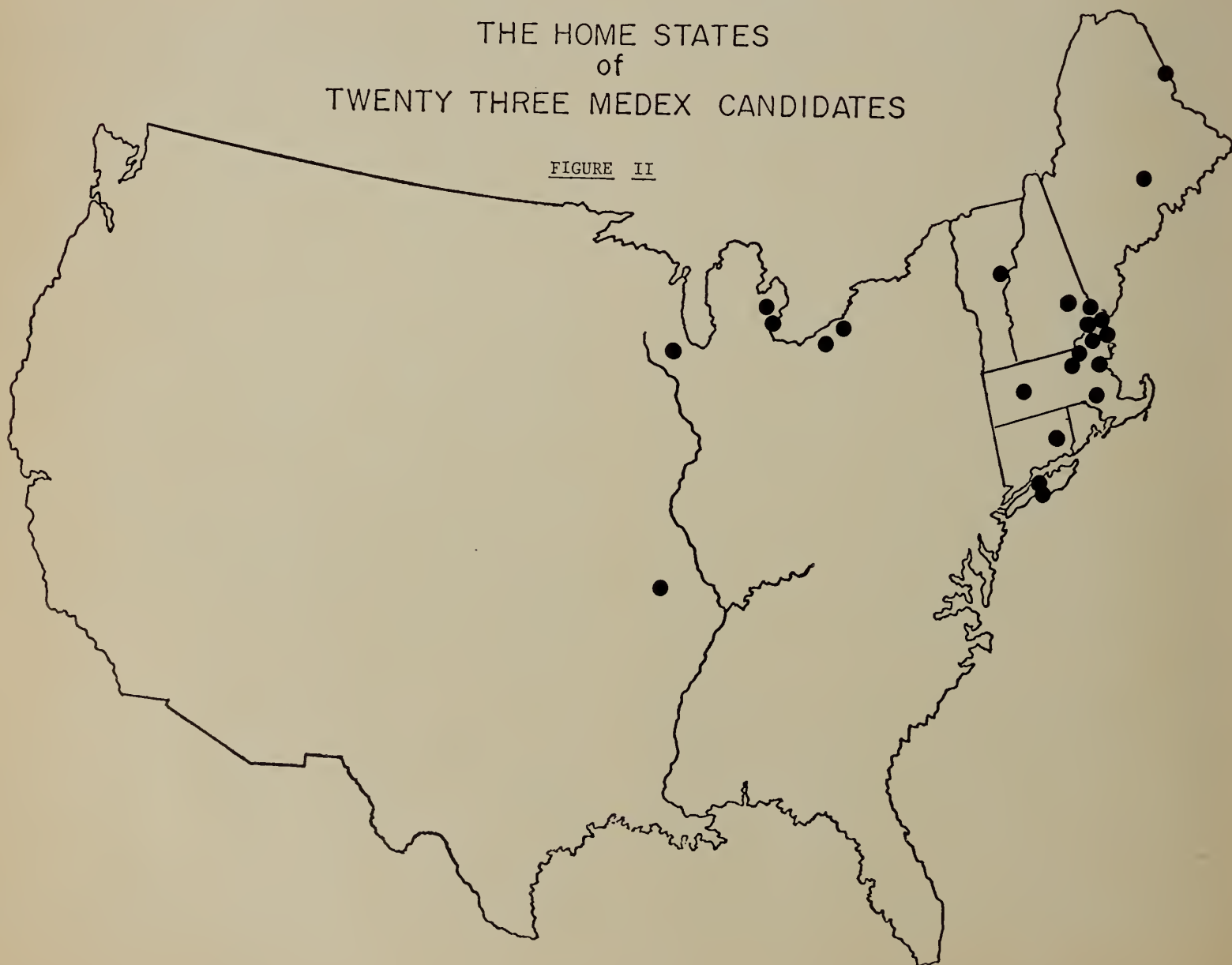
work and clinical experience at the Dartmouth-Hitchcock Medical Center; Phase II, the field phase, complements the clinically oriented academic trimester with a twelve month apprenticeship on site in the specific preceptor community. There the preceptor, in a one-to-one relationship with his Medex, assumes the teaching role relinquished by the Medical Center. The comparative brevity of the formal Medical Center experience is predicated upon the prior medical background of the former corpsmen. Attention is drawn to the fact that Phase I constitutes but 20 per cent of a fifteen month program, and that Phase II encompasses 80 per cent. This partition underlines the field nature of the MEDEX experiment. In the short period of three months then, the Dartmouth-Hitchcock Medical Center can aim realistically only at providing the Medex with an orientation; it cannot provide him with mastery.

CURRICULUM

The MEDEX-New England curriculum at the Dartmouth-Hitchcock Medical Center encompassed a total of 750 hours per Medex, or about

MEDEX-NEW ENGLAND THE HOME STATES of TWENTY THREE MEDEX CANDIDATES

FIGURE II



62 hours per week per Medex over a twelve week period. The total of these hours was partitioned among three categories of experience: didactic, clinical exercise, and emergency room medicine. The substantive thrust of the curriculum was in four areas: Medicine (with intensive instruction in historical data collection and in physical diagnosis), Psychiatry, Pediatrics, and Surgery. The most intensive effort was in the area of Medicine, in an attempt to remedy partially and in a short time the medical deficits imposed on the Medex by the nature of the military medical experience, largely an experience in acute battlefield medicine. This is not to say that the military medical career was of no moment. The military medical experience was used, importantly, to set the curriculum point of departure and the instructional level. Formal lecture material and clinical exercises, no matter to what disease entities they related, were considered first within the frame of reference of the medical history and the complete physical examination. Only secondarily did interest focus upon the pathophysiology unique for that disease entity. Thus, we want to make clear the specific bias underlying the collective endeavor of the entire curriculum of MEDEX-New England in Phase I: to turn out an individual capable of collecting historical medical data and reliable in the performance of a standardized physical examination. Certainly in the preceptor community environment the Medex additionally will achieve competence in a wide diversity of activities; and this is entirely as it should be. But the unique capability of the Dartmouth-Hitchcock curriculum is in its provision of these two skills, within a matrix of clinically oriented basic didactic material, and in as concentrated form as is feasible within three months.

MEDEX ROLE

It is our perception that the Medex role is that of a physician's assistant and *not* of an assistant physician. From this perception emerges our concern *re* the proper limitations of the sphere of activity of the Medex. Thus, we believe there exists an overriding necessity to define rigorously his universe, and as well we believe it is mandatory to audit the calibre of his performance. The challenge of these concerns must necessarily be met initially in Phase I.

To this end, as has been mentioned, the program outlined and restricted the universe of the Medex in multiple ways: (1) the decision was made at the outset to place major emphasis on expertness

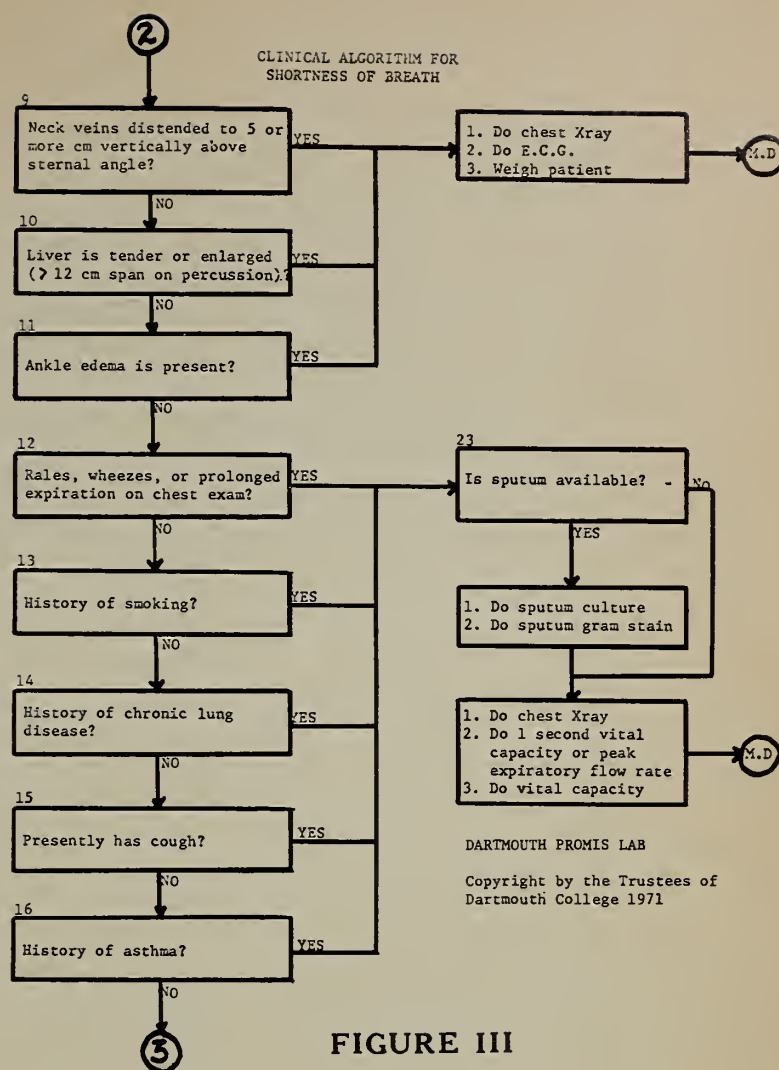


FIGURE III

in data collection and in reliability in the performance of the physical examination in order to make these the areas of prime competence of the Medex; (2) the kind and extent of historical data considered essential for the Medex to collect was outlined in detail, and summarized in a questionnaire form containing some 300 items; (3) consensus was reached *re* the points to be covered in the physical examination, and every Medex was required to demonstrate his ability to perform a physical examination and to differentiate normal from abnormal within the context of that physical examination. Finally (4) the heuristic device of the clinical algorithm, as developed by Sox and Sox and Tompkins¹, and derived from the original conception of Berger and Tufo², is being used experimentally, to provide an operational framework for specific, defined activities of the Medex.

Clinical algorithms constitute highly specific, step by step directions based upon rigorous clinical logic, for the solution of acute medical problems (i.e., acute chest pain, diarrhea, headache), from the moment the specific problem reaches the clinical horizon through the medical workup and compilation of an appropriate medical data base to final solution and preceptor audit. Figure III provides a partial illustration from such an al-

(Continued on Next Page)

gorithm (The Shortness of Breath Algorithm). It will be obvious that the algorithm at once serves both as an important system for the culling of disease-specific clinical data and as a guidance system. It leads the Medex only through those decision points and to those branch points about which he has competence to obtain the relevant data. When he arrives at a point in this system requiring decisions and demanding data beyond his abilities and training, his involvement comes to an end, and the patient is remanded to the special universe of the physician. Acute illness requires the knowledge and demands the specific attention of the physician. However, the device of the algorithm permit the Medex *safely* to enter into the workup of acute illness and to collect data which will be indispensable to the physician if he is to handle that illness in a thoughtful and a thorough manner. The participation of the Medex in this area of medicine certainly underlines his function — extending, relieving, and providing support to the primary physician, for acute medicine may constitute as much as 35 per cent of his practice, and in some instances the figure may be higher.

PHYSICIAN'S ASSISTANT

It is recognized, then, that there exists the special universe of the physician and that it is characterized by dual attributes which are in the true sense of the term, unique, as distinct from those portions of the physician universe which may be congruent with parts of the Medex universe. These unique attributes are: (1) the ability to carry out the intellectual function known as the exercise of clinical judgment, and (2) the ability to engage in the exercise of differential diagnosis. The Medex does not possess these attributes, and he is excluded by definition from this special universe, for, again, he is *not* an assistant physician. He is a physician's assistant. Insofar as the Medex operates only within the context of his training, the algorithm has a containing effect. This effort to confer a rigidity upon, or to provide a narrow definition of, the Medex universe stems from concern with the qualitative aspect of medical care. In one sense this concern is analogous to what is referred to in the world of industry as "quality control" of a product. But still, a significant difference obtains: for the reason that in the realm of clinical medicine we are trafficking in human lives. It is this difference or qualifying circumstance which must set the tone for the entire MEDEX project.

We are concerned then with the monitoring of performance. Synchronous with the start of the Medex in their preceptor communities, a combined medical record and audit system has become operational. Through a computer program based at Kiewit, the Dartmouth Computer, the correctness and the completeness of data assembled by the Medex as he utilizes the clinical algorithms can be measured.

For MEDEX Class I, now in the field, and for MEDEX Class II soon to start a new cycle of training here in Northern New England, MEDEX-New England has under development a structural scheme through which it will provide the Medex with access to instruction in applications of new technologies in medicine and to formal review of their skills at appropriate intervals. Unless we maintain a healthy and equal concern, both for renewal and extension of skills in the Medex armamentarium, the assistance, relief, and support, which constitute the important functional attributes the Medex brings to the preceptor community, will fall away. Resource sites for this multicentric endeavor have been identified in five of the six New England States: Maine, New Hampshire, Vermont, Massachusetts, and Connecticut, with overall responsibility for design and continuity of effort residing at Dartmouth Medical School.

CAREER OPPORTUNITIES

The Medex has made it abundantly clear that without a substantial postgraduate opportunity the Medex career *per se* is not an inordinately attractive one. The Medex additionally has expressed his bent for practically oriented clinical and technical training as opposed to academic exercise. He wants to add special training related to basic knowledge and experience already in hand. He wants to expand literally. He characterizes himself first and foremost as a health professional in the sphere of *applied* medicine. We hope to meet this challenge through realistic programs characterized by accessibility and by practicality, programs which answer his clearly articulated specific needs to broaden his existing horizons. At a later date, should he express a desire to define new ones, specific programs can be developed to meet specific demands.

The moment of self-appraisal is a solemn and even painful one, for evaluation entails measurement, and inherent in the process of measurement is the potential for delineation of failure to reach goals. Nonetheless, MEDEX-New England is pre-

(Concluded on Page 338)

Developing Paramedical Programs In Rhode Island For Health Care Manpower Needs

Health Sciences Center Would Coordinate All Rhode Island Educational And Clinical Programs Related To Health Care

By Heber W. Youngken, Jr., Ph.D.

So great are citizen interests in Rhode Island in its health manpower problems, it would appear the State has become besieged by health study committees. In this respect it is not at all different from most other states. Beginning several years ago and especially since 1966 with a conference in Washington, D.C., sponsored by the Departments of Labor and HEW, on job development and training for workers in Health Sciences¹, the critical challenge of training health service personnel has been the subject of numerous study committees throughout the country. Since 1968 at least ten major reports, each with significant recommendations about how to improve our situation in primary and paramedical or allied health manpower in Rhode Island, have emerged from as many different study committees and a host of interested people. Some of these have come from such highly regarded activities as the Governor's Committee on Health Care Costs (1970-71), the Rhode Island

Council on Community Services (Uhl Report, 1969), the Health Occupations Study for Rhode Island 1969 (Lacava Report), Office of Comprehensive Health Planning, Department of Health 1969 (Yacavone Report), the General Assembly Brosco Bill of 1968, the Roger Williams Hospital Health Career Mobility Feasibility Study of 1970 (Kaplan Report), and several others. Thus, there is no dearth of evidence, including statistics, which support the fact that manpower shortages do, indeed, exist. Something more should be done to improve the career opportunity and those for training as part of the solution to the problem.

HEALTH RELATED PROGRAMS AND ENROLLMENTS

We have seen emphasis placed upon improving the physician and nursing shortages in Rhode Island, including those aspects which relate to improved training opportunities. The matter of a bonafide medical school at Brown University with supporting programs at the University of Rhode Island (URI) and other institutions in the State is under consideration. Opportunities for nursing education have been greatly improved by the growth of the associate degree program in the Rhode Island Junior College, the new baccalaureate

HEBER W. YOUNGKEN, JR., Ph.D., *Provost for Health Science Affairs; Dean, College of Pharmacy, University of Rhode Island, Kingston, Rhode Island.*

Presented at the 160th Scientific Assembly of the Rhode Island Medical Society, Providence, R. I., April 24, 1971.

(Continued on Next Page)

TABLE 1
ENROLLMENT DATA HEALTH RELATED PROFESSIONS UNIVERSITY OF RHODE ISLAND

| U.R.I. | 1969-70 | 1970 Graduates | 1970-71 | 1971 Graduates (Projected) |
|-------------------------------------|---------|-------------------|---------|----------------------------------|
| Pharmacy | 265 | 22 | 305 | 36 |
| Nursing (4 years) | 2553 | 38 | 280 | 65 |
| Nursing (M.S.) ..... | ..... | .... | 20 | 0 |
| Dental Hygiene | 51 | 11 | 80 | 25 |
| Medical Technology | 48 | 12 | 80 | 7 |
| Dietetics | 22 | 7 | 42 | 16 |
| Ventilation Therapy | 2 | 0 | 3 | 0 |
| Clinical Psychology | 23 | 13 | 25 | 1 |
| Biomedical Engineering | 0 | 0 | 4 | 4 |
| Speech Pathology-Audiology | 12 | 4 | 44 | 8 |
| Environmental Health Sciences | 0 | 0 | 2 | 0 |
| Gerontology | — | — | — | — |
| *Pre-Medical, Pre-Dental | 75 | 30 | 97 | 26 |

*Includes undergraduate in all majors who have indicated interests for medical and dental school preparation.

TABLE 2
ENROLLMENT DATA HEALTH RELATED PROFESSIONS,
RHODE ISLAND COLLEGE AND RHODE ISLAND JUNIOR COLLEGE

| | 1969-70 | 1970 Graduates | 1970-71 | 1971 Graduates (Projected) |
|------------------------------------|---------|-------------------|---------|----------------------------------|
| RIC | | | | |
| Nursing (4 years) | 0 | 0 | 41 | 0 |
| Medical Technology | 20 | 3 | 30 | 0 |
| Social Service | 10 | 3 | 55 | 10 |
| RIJC | | | | |
| Nursing (2 years) | 160 | 63 | 260 | 137 |
| Medical Laboratory Assistant | 16 | 16 | 21 | 21 |
| Dental Assistant | 17 | 23 | 17 | 23 |
| X-Ray Technician | 34 | 0 | 79 | 36 |

TABLE 3
ENROLLMENT DATA HEALTH RELATED PROFESSIONS,
BROWN, PROVIDENCE COLLEGE, SALVE REGINA

| | 1969-70 | 1970 Graduates | 1970-71 | 1971 Graduates (Projected) |
|--------------------------------------|---------|-------------------|---------|----------------------------------|
| Brown University | | | | |
| Medical Sciences MMS (6 years) | 160 | 8 | 188 | 12 |
| *Pre-Medical, Pre-Dental | 384 | 50 | 437 | 75 |
| Providence College | | | | |
| *Pre-Medical, Pre-Dental | 154 | 337 | 172 | 29 |
| Salve Regina | | | | |
| Nursing | 160 | 35 | 187 | 33 |
| Medical Technology | 23 | 4 | 18 | 6 |

*Includes undergraduates in biology and other majors who have indicated interest for medical and dental school preparation.

degree course at Rhode Island College, and the expansion of the already established URI program in nursing to include a curriculum leading to a Master's Degree. The College of Pharmacy at URI has since 1957 been one of the strongest health science undergraduate and graduate programs in the country. It has significant input to medical and nursing education, as well as hospital and community practice. In fact, during the past six years, eight Pharmacy graduates have gone on to medical schools. Each of these health professional programs needs continuous strong support.

A number of other health professional programs including pre-professional (pre-medical, pre-

dental, pre-veterinary medicine) and certain paramedical programs are also available among the many institutions in the state. Tables 1-3 show recent enrollment figures of some of these. Thus, it can be seen that the public institutions of the State have a total of about 18 medical support programs, including nursing and pharmacy, and the private institutions, such as Brown, Providence College, and Salve Regina, currently support at least five collegiate programs including the Brown medical sciences programs and the pre-medical-pre-dental opportunities at Providence College and Brown. About five allied health programs are also in operation through the Office of

Vocational Education and certain secondary schools in different parts of the state. Two more are to be implemented by 1972. These high school programs are being developed with a "career ladder" concept as a means of encouraging trainees to take paramedical jobs and participate in continuing education for further development.

If we accept the concept of a team effort in patient care, and delegate responsibilities to each member of the team, it is important that more be done in Rhode Island to strengthen our resources in several existing paramedical areas and to create new ones. As we increase the opportunities for training health professionals, we should be cognizant of what already exists in the institutions of the State and of our deficiencies.. There should be a better kind of organization than now exists

among all of our programs, including paramedical ones, and we should plan a systematic method for developing new kinds of paramedical or medical-dental-support program training within a more meaningful organizational structure. It is to this point that I wish to address a few thoughts.

For the purpose of the discussion the subject will be limited to those paramedical or allied health professional training programs which are currently available in Rhode Island and certain others for which hospitals, communities, and other institutions have expressed a need. Using the surveys of the Rhode Island Comprehensive Health Planning Study (Yacavone Report), the Roger Williams Hospital Health Career Mobility Study (Kaplan Report), and the HEW Division of Al-

(Continued on Next Page)

TABLE 4
AVAILABILITY OF PERSONNEL
22 VOLUNTARY AND STATE HOSPITALS IN RHODE ISLAND
FISCAL YEARS 1968-73 (KAPLAN REPORT)*

| Job Category | Full-Time Per- sonnel Equiva- lent Positions Budgeted October 1, 1967 | Full-Time Per- sonnel Equiva- lent Positions Filled October 1, 1967 | Full-Time Per- sonnel Equiva- lent Employees Needed October 1, 1972 |
|--------------------------------------|---|---|---|
| Cytotechnologist | 25 | 22 | 26 |
| Dental Hygienist | 2 | 2 | 4 |
| Dietitian | 64 | 52 | 81 |
| Registered Nurse, General Duty | 1,643 | 1,367 | 2,080 |
| Licensed Practical Nurse | 1,095 | 854 | 1,425 |
| Medical Records Librarian | 28 | 21 | 41 |
| Medical Technologist (ASCP) | 126 | 102 | 176 |
| Other Laboratory Technician | 304 | 300 | 403 |
| Occupational Therapist | 12 | 9 | 32 |
| Pharmacist | 52 | 47 | 73 |
| Physical Therapist | 53 | 38 | 91 |
| Social Worker | 114 | 84 | 156 |
| Surgical Technician | 81 | 82 | 151 |
| X-Ray Technician | 132 | 128 | 184 |
| Total | 3,731 | 3,108 | 4,923 |

*From report by M. Kaplan "Removing Obstacles to Health Caree Mobility in the State of Rhode Island" 1970, private communication. Roger Williams Hospital, Providence, Rhode Island.

TABLE 5
CERTAIN PARAMEDICAL PERSONNEL IN RHODE ISLAND**

| | | | |
|---|-----|--|-----|
| Audiologists | 13 | Medical Secretaries | 387 |
| Audiometrists | 10 | Medical Technologists | 174 |
| Child Development Specialist | 2 | Occupational Therapists | 17 |
| Corrective Therapist | 1 | Orthotists | 3 |
| Cytology Technicians | 27 | Pediatric Technicians | 35 |
| Dental Assistants | 255 | Peripatologists | 2 |
| Dental Laboratory Technicians | 52 | Physical Therapists Aides | 39 |
| Electrocardiograph Technicians | 43 | Prosthetists | 2 |
| Electroencephalograph Technicians | 20 | Psychologists—Full Members (Ph.D.) | 82 |
| Formula Room Workers | 13 | Psychometrists | 4 |
| Health Educators | 5 | Radiologic Technologists | 259 |
| Inhalation Therapists | 38 | Recreational Directors | 11 |
| Laboratory Technicians | 402 | Speech Pathologists | 27 |
| Mediccal Records Librarians | 21 | Operating Room Technicians | 65 |

**"Health Manpower in Rhode Island", a communication from the Office of Comprehensive Health Plan-ning (J. Yacavone), R. I. Department of Health (1969)

lied Health Manpower training programs as guidelines (Tables 4-5), there are at least 28 major paramedical specialties for which manpower shortages exist in the State. These require some kind of practical training in hospitals or similar facilities. In one way or another all serve medicine, dentistry, pharmacy, and nursing and other primary health professions in total patient care.

Not included in the list are certain other paramedical specialties, equally important, such as physicians assistants, hospital administrators, medical record secretaries, nursing assistants, sanitarians, ophthalmic assistants, and optometric technologists. If, for example, we offered formal training for all such specialties identified under Medicare, the list would exceed more than 35 or 40 health specializations.

The supply of qualified and motivated young people for career development in health specialties certainly exists in the State. Hospital and educational institution facilities are located within convenient geographical areas, and the enthusiasm of facilities and administrators for meeting the educational needs is high. Despite curtailed college and university budgets, each institution is attempting to do something about training needs. The numerous professional societies, including the Rhode Island Medical Society, are well aware of their commitments in recruitment and, although many members need to do more, some progress is being made.

WEAKNESS IN COORDINATION

Despite all of this, a serious weakness exists in Rhode Island for developing paramedical training programs. This weakness lies in the lack of a central organization and direction such as usually can be provided by the staff of a large city or state supported university Health Science Center with its medical, dental, nursing, pharmacy, and allied health professional schools and teaching hospitals, each in close proximity and under a university or multi-university umbrella. Why is it necessary that some form of coordination be instituted for Rhode Island? First, as has been stated previously, there are a number of committees hard at work in the State on health manpower and training problems. Their recommendations thus far are similar and have a common theme — more recruitment and more training opportunities for health careers for Rhode Islanders. Medicine and the allied health professions group can be singled out as critical areas for attention at this time. But there is no consortium or group responsible for the

educational efforts of public *and* private institutions. These should be coordinated state-wide if we are to solve our problems in a most efficient manner. Professional societies bring pressures upon the state institutions to increase enrollments for existing programs in the paramedical specialties or to institute new ones. The Board of Regents for Education in the State Institutions must, through further study, determine the needs and costs for those which require collegiate training in the state institutions. How to implement a program requires curriculum and facilities planning which in turn requires faculty and administrative efforts in planning. Although through the Board of Regents there is a mechanism for doing this collaboratively at the State Institutions, no such agency exists among the private institutions of Rhode Island for a similar approach. Some of these already have paramedical programs or have expressed interest in planning for new ones. There can be instances when such pressures result in duplications at two or more institutions when a single facility properly supported would be sufficient.

To complicate the matter of developing paramedical programs in an institution of higher education is the lack of coordination that exists for those in hospital facilities. Often a hospital brings pressure on an institution to conduct the teaching of courses and to staff the clinical part of the training, at least in part. This is done, whereupon the hospital suddenly finds itself without space for faculty or without space for trainees in its technical laboratories or on the wards. Or severe scheduling problems for trainees result. The hospital clinical facilities in Rhode Island for training more paramedical trainees of the State Institutions are limited. So are the budgets of those that now conduct these programs. The university and college courses must also fit schedules, some of which involve regularly scheduled courses with other majors at the same institutions.

Some projections have been made for paramedical manpower needs in Rhode Island based upon the decisions of the hospital medical staff, paramedical staff, or both without consultation with the hospital administration. These plans can require expanded hospital facilities, including a greater hospital commitment for the clinical teaching part of the training. Even though educational institutions seek help in decision making from the Hospital Association of Rhode Island and the Rhode Island Coordinator of the Tri-State Regional Medical Program, there are still un-

TABLE 6
GENERAL STUDIES ENVIRONMENTAL*
EXAMPLE CORE CURRICULUM

| | | |
|--|--|---|
| Environmental Biological Sciences Physical Sciences Social Sciences | Communicative Humanities Languages Mathematics | Interpretive Behavioral Science History Philosophy |
| SPECIAL CORE | | |
| Environmental 1. Man and His Environment A. Natural Sciences B. Social Sciences C. Community Health | Communicative 1. Health Terminology 2. Techniques of Interview and Communication 3. Computer Science | Interpretive 1. Health Ethics 2. Behavioral Science 3. Statistics |
| | | Directive 1. Emergency Care 2. Preventive Medicine |

*Hamburg J: Core curriculum in allied health education. **JAMA** 210:112, 6 Oct 69

answered questions. Neither agency has decision making authority as far as educational and hospital coordinated programs are concerned.

In attempting to coordinate a paramedical program with hospitals in which practical aspects of such a course must be given, each institution is at the mercy of the hospitals. It must rely on negotiation and multi-hospital and inter-institutional cooperation. There is competition between the students of institutions for places in the clinics. Obviously under the present limitations of the hospitals, an increase in paramedical trainees for hospital places will surely add to this problem. Similar conditions in neighboring states indicate already that priority for training in the hospitals of these states goes to their own students, as it should.

The second major reason for considering a statewide coordinated organization in health science education and recruitment, i.e., a Health Sciences Education Center for Rhode Island, is the matter of the educational programs themselves, the curriculums. What statewide educational agency is responsible for coordinating both public *and* private instruction in these professional or sub-professional areas? Much has been said in committee reports that some kind of an upward and lateral career mobility for paramedical personnel should be provided to attract persons to careers. This applies to subprofessionals as well as professionals. It implies the availability of transitional programs of a kind and that careful attention is given to job placement. Who is responsible for the advisement and counseling so vital for the success of such a program? Who sets the standards among the institutions, including the hospitals, and pro-

motes the mobility? Is this the responsibility of the academic institution, the professional organization, or the agency which provides the professional training?

Related to this is the matter of establishing "core" curriculums (Table 6) which many have proposed for certain paramedical trainees as inhalation therapists, physical therapists, dental hygienists, physician and pharmacist assistants, and others. Several of these allied health sciences require the same basic science courses. These need not be as comprehensive as those for other paramedical students, i.e. medical technologists, ventilation therapists, or pre-medical, pre-dental, pharmacy, and science majors. Model programs which provide for these kinds of core curriculums and paramedical programs already exist at such institutions as the University of Kentucky Health Sciences Center, the Cleveland City University Health Science Center, and the City University of New York Health Sciences Center, where coordination exists and responsibilities can be defined. In the latter case, a multi-university health education program has been organized and this involves a geographical area not much smaller than the size of the state of Rhode Island. In fact, the model programs of the entire New York State (State University of New York, or SUNY) health sciences programs are multi-university, college, and hospital cooperative endeavors. It is this kind of organization that provides the coordination that is lacking in Rhode Island.

A PROPOSED HEALTH CENTER FOR RHODE ISLAND

What I am really saying is that the time has
 (Continued on Next Page)

come for us seriously to consider the establishment of a *Health Sciences Education Center* in Rhode Island for the coordination of all educational and clinical programs of the health sciences — from medicine and dentistry to the most specialized of the paramedical areas. This definitive organization with its staff should have decision making authority as a consortium of key health science educators and administrators selected from the public and private institutions of the state, including hospitals and clinics. Its primary responsibilities should include the coordination of curriculums, facilities, and manpower for improving existing training programs and planning new ones. Its decisions should, when appropriate, be submitted to higher administrative echelons for approval, i.e. the presidents of the institutional members of the consortium, the Board of Regents, directors of State departments, and such other higher authority as would be concerned. The health science programs of the existing institutions, including hospitals, which support training could thus be brought more effectively together as members of the State's *Health Sciences Education Center*, a kind of multi-university and multi-college approach to promote a stronger effort in this kind of education and career planning. There need be no major change in the position of the existing health sciences colleges, departments, and programs of an institution. For example, the medical program at Brown, nursing schools at the State institutions, the pharmacy college at URI, and the dental hygiene department at URI would continue as they now exist as components of their universities and the Center. I am simply proposing that these be identified as components of a larger coordinating Center for a statewide systematic effort in health career education and planning.

Obviously funding for the administrative functions of such a *Health Sciences Center* will be required and, in large measure, should come from State subsidy. This proposal is not too unlike that currently developed by the Allied Health Manpower subcommittee of the Governor's Committee on Health Care Costs. That committee has recommended a health manpower office be established as a component of the State Board of Regents; that a State health career guidance center be organized, and that continued support be given to the comprehensive health planning office in the Department of Health. All of these functions are related and could be brought together as important activities of a multi-university and multi-college

Health Sciences Center.

I propose that a feasibility study be made for the establishment of such a Center. In the interim period I suggest that SEARCH, the Rhode Island Health Services Research, Inc., accept the responsibility for coordinating statewide activities and organizing the Center; that it do so in collaboration with the Rhode Island Regional Medical Program as a source of funding and as an advisory agency. This collaboration should include the implementation of more programs in clinical training for allied health professionals as well as for medical students.

As Edmund Pellegrino² of Stony Brook, New York, has stated in writing about a health sciences center as a viable entity: "It is essential that medicine, dentistry, nursing, and the allied health professions develop their programs in close collaboration from the outset. The Health Sciences Center is the only instrument whereby our health professions can jointly examine the health needs of patients and society, determine what roles must be developed to meet these needs, and devise new and more effective ways to do so. Public interest in health is too high to permit dalliance or blind defenses of professional prerogatives to interfere with needed cooperative efforts." Further, I see the proposed *Health Sciences Center* as an instrument of social purpose dedicated to the wider distribution of scientific and concerned health care for the people of Rhode Island. Many of the solutions to our problems in delivering better health care services should emerge from our educational and hospital institutions as they work together as components of a *Health Sciences Center* in our State.

REFERENCES

- ¹Proceedings of the Department of Labor, Health-Education-Welfare Conference on Job Development and Training for Workers in Health Sciences. U.S. Government Printing Office (1966), p. 102
- ²Pellegrino, ED: "Planning the Health Sciences Within a University Context: The Health Sciences Center at Stony Brook," (1966), In Education in the Health Related Professions, *Ann. N Y. Acad Sci*, 874-884



ONE SENTENCE ESSAY

All great occasions have an element of crowding.

. . . Winston Churchill

The herpes group of viruses cause lympho-proliferation. A herpes virus probably is the agent in infectious mononucleosis; in tissue culture they are capable of causing human lymphoid tissue to replicate. Herpes viruses can be regularly cultured from Burkitt tumor cells; the association of the virus with this disease is furthermore confirmed by sero-epidemiological studies. It is a herpes virus which causes Lucke's frog kidney carcinoma, Marek's chicken lymphoma, and lympho-reticular tumors in monkeys and marmosets. The herpes virus in these primate lympho-reticular tumors, however, is innocuous for the squirrel monkey from the kidneys of which the virus may be regularly cultured; but when injected into monkeys and marmosets these viruses regularly produce fatal lympho-reticular tumors. All of this has been summarized in a recent communication to *Nature* in which Morgan, Epstein, Achong, and Melendez further showed on morphological grounds, determined by the electron microscopy, that these lympho-reticular tumors are caused by a herpes virus.

That viruses cause cancer is indisputable. Oncology and Virology must tell us how; a model is available. Why does *Herpes saimiri* occurring in normal squirrel kidney cells have no effect in its

host, but regularly produces lympho-reticular tumors when inoculated into related species? Why does the herpes-like EB virus produce a self-limited disease, infectious mononucleosis, on the one hand, but in association with malaria produce the most fascinating of tumors, namely, the Burkitt lymphoma? The answers must be forthcoming and are basic to an understanding of cancer.

We must support tumor research on this basic level of Virology and its first cousin Molecular Biology. Attitudes in official Washington suggest a trend to austerity in research funds, and allocation primarily to applied research. J. D. Watson recently expressed the opinion that a whole generation of scientists may be lost with cut-backs in funding for basic research. In the last analysis, science connotes people. It is the person in basic research and not his project that Washington must support. Goethe observed that genius is cultivated in solitude. By this we interpret him to mean an intellectual solitude devoid of concerns for funding or practical objectives. Basic research on the interplay of viruses and cancer is a national priority. The profession must in every way support its funding; for here, it appears, some of the answers to cancer questions await the keen investigators attention.

SULFAMYLON IN BURNS

Topical treatment with Sulfamylon Cream® (mafenide) resulted in a dramatic drop in deaths due to sepsis, according to a report by Lt. Col. B. D. Allen and his group. The observations were made on American Vietnam casualties who had sustained severe body burns of 20 to 59 per cent of body surface.

Sulfamylon Cream® replaced silver nitrate in 1967 as the standard method of treating burns at the 106th General Hospital in Yokohama. A total of 1,635 patients were treated with Sulfamylon® in 1967 and 1968, following the principles of burn therapy and methods established at the Surgical Research Unit, Brooke General Hospital, Texas. The average burn area of the 1,635 patients was 64 per cent.

In a group of 467 patients with body burns of 20 to 59 per cent, treatment with Sulfamylon Cream® resulted in a drop in mortality of 30 per cent in comparison with a similar group treated at the Surgical Research Unit prior to the advent of Sulfamylon®.

No deaths occurred in patients with body burns

of less than 20 per cent. This group constituted 65.5 per cent of all patients treated. Nineteen of 22 patients in whom burns covered 70 to 79 per cent of their bodies did not survive. There were 31 deaths in 43 patients with 60 to 69 per cent body burns. An important factor which contributed to the deaths was the large number of patients with "serious associated war wounds." Additionally, 75 per cent of this group sustained their burns within an enclosed space such as an APC (armored personnel carrier), helicopter, tank, or bunker with a resulting high incidence of inhalation injuries which contributed significantly to the mortality.

Lt. Col. B. D. Allen and colleagues conclude "that Sulfamylon® has made its most significant contribution in the group with burns of 20 per cent to 59 per cent, primarily because of the elimination of wound sepsis.

REFERENCE

- 1Allen BD, et al.: Treatment of 1963 burned patients at 106th General Hospital, Yokohama, Japan. *Journal of Trauma* 10:386-391, May 1970

HOUSE OF DELEGATES REPORT

(Continued From Page 303)

posed addition to the statute relating to chiropractic licensure by reciprocity where an examination by the National Board of Chiropractic Examiners would be an alternative to the qualifications set forth in the present Rhode Island statute.

11. It approved the format for the annual meeting on April 24, and it voted that the Society should be host at the reception and cocktail party preceding the annual dinner.
12. It approved that the Woman's Auxiliary may have a booth at the annual meeting reception to sponsor memberships in the RIMPAC-AMPAC Organizations.
13. It received a report from Dr. S. D. Simon, immediate past president of the Medical Economics Council, on the activities of that organization in the past year, and it also received from Doctor Simon a summary report on the development of the Rhode Island Health Services Research, Inc. of which the Society is a member.

REPORT OF THE TREASURER

JOHN P. GRADY, M.D.

Agency Account

The Trust and Investment Division of the In-

dustrial National Bank has submitted an appraisal of the Society's pooled funds as of January 31, 1971, and the summary parts of this appraisal are made a part of this report. (Appraisals of investments may be made by any interested member at the executive office.)

The investment management officer for our account has notified me as follows:

"We are pleased to report the portfolio has advanced substantially in value from the levels recorded in July of last year. The investment program approved by the council has been completed and as a result we realized gains in the vicinity of \$5,000 and increased the annual flow of income by 10 per cent.

The market is once again approaching a state of equilibrium after experiencing a tumultuous year which saw record-high interest rates and one of the sharpest stock price corrections in recent history. We believe the intermediate term outlook is good for both the stock and bond markets. Inflationary pressures should continue to ease, and government policies should stimulate expansion of the economy over the next twelve to eighteen months. The consumer holds the key to 1971, however, as his spending accounts for two-thirds of the Gross National Product. Hopefully his confi-

(Continued on Page 329)



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

HOUSE OF DELEGATES REPORT

(Continued From Page 328)

dence will grow and his spending will expand as better business conditions develop and the Vietnam withdrawal proceeds on schedule."

Attached is the latest report of the invested funds of the Society as submitted by the Trust Department of the Industrial National Bank.

Veterinary Association Gift

We have received, and acknowledged, a gift of \$100 from the Rhode Island Veterinary Association for the purchase of books and/or journals on veterinary medicine for our medical library.

Rhode Island Medical Journal

The RHODE ISLAND MEDICAL JOURNAL finished 1970 with a cash operating loss of \$2,162.38, in addition to a debit due the Society for staff and facilities in the amount of \$5,000 for 1969, and \$5,090 for 1970. Reduced national advertising plus increased costs of publication account for the deficit which was met out of the accumulated cash balance available at the start of 1970. The JOURNAL had a cash balance available at the start of 1970. The JOURNAL had a cash operating balance to start 1971 of \$2,442.

RESOLUTION

From the Executive Committee of the Providence Medical Association:

* * *

Whereas, the Rhode Island Medical Society, through its policy-making body, the House of Delegates, has on two occasions, in 1968 and again in September 1970, clearly set forth what it considers to be sound medical guidelines for a possible therapeutic abortion to be performed in this State, and

Whereas, the subject of abortion has created much controversy here, and throughout the nation, by reason of the ethical, moral and legal implications of the procedure,

Therefore, the Executive Committee of the Providence Medical Association requests that the House of Delegates of the Rhode Island Medical Society not authorize the introduction at this time of legislation of its own writing in the Rhode Island General Assembly on the subject of therapeutic abortion.

. . . Adopted at an Executive Committee meeting on March 2, 1971.

REPORT OF COMMITTEE ON MEDICAL ASPECT OF SPORTS

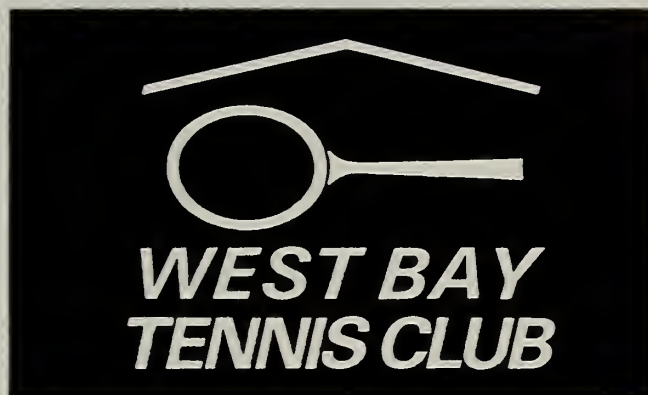
The Committee reports an excellent meeting on the Medical Aspect of Sports which took place at

(Continued on Next Page)

INDOOR TENNIS

NOW ACCEPTING MEMBERSHIPS

OPEN TO ALL
PLAYING TIME STILL AVAILABLE



NOW OPEN

FEATURING BOLLTEX SURFACE COURTS

Centreville Road, Warwick

Route 117 WEST EXIT — OFF 95

For Brochure Call 828-4450

or write Box 387

Warwick, R. I.

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

54 Custom House Street

Tel: — 831-4833

Providence, Rhode Island

the Rhode Island Hospital on Friday, February 19, 1971. The principal speaker was Dr. Fred Allman, Jr., of Atlanta, Georgia. Doctor Allman is orthopedic surgeon to the Atlanta Hawks of the National Basketball League, Atlanta Braves of the National Baseball League, and Atlanta Falcons of the National Football League, and also is the orthopedic surgeon for the Atlanta Public School System. Doctor Allman not only gave three excellent lectures on the injuries to the ligaments of the knee, rehabilitation of an injured athlete, and shoulder injuries in athletes, but he also examined some clinical cases and discussed them. Professor Richard Cole, Head Trainer, in the department of athletics at the University of Rhode Island gave a demonstration of taping and wrapping of the ankle and knee joints.

The Conference was exceptionally well attended with the auditorium being completely filled for both the morning and the afternoon sessions. The meeting was attended by trainers, coaches, school physicians, nurses and orthopedic surgeons. Although the meeting was not advertised outside of the state of Rhode Island, we had several visitors from New Jersey, New York, Pennsylvania, Connecticut and Massachusetts.

Respectfully submitted:

A. A. SAVASTANO, M.D.

Chairman

CHILD-SCHOOL HEALTH COMMITTEE

At the January meeting of the Child-School Health Committee, the subject of school health examinations and forms was discussed at length. It is the feeling of the committee that there is a great deal of duplication and waste effort inherent in the current system of mass school exams and the filling out of health forms.

Several suggestions were made, and Doctor Starbuck of the State Health Department offered to summarize these in the form of recommendations

and health care. It is hoped that children *not* already receiving immunizations and health care from private physicians or clinics could be identified and given as close to total care as possible rather than having all children given perfunctory and, in most cases, unproductive exams.

Respectfully submitted:

WILSON F. UTTER, M.D.

Chairman

COMMITTEE ON CONTINUING MEDICAL EDUCATION

I am pleased to submit a progress report on the activities of the Committee on Continuing Medical Education. At a meeting of the Committee held on Thursday, February 18, 1971, the members laid basic plans of the authorized statewide conference on continuing medical education and an ad hoc subcommittee was asked to work out the details.

Subcommittee Report

The subcommittee received Dr. Howard Browne's report on the facilities on Goat Island in Newport. They would seem to be ideal for the conference; therefore, the subcommittee recommended that the program be held at the Hilton Hotel on Goat Island. The committee also agreed that its first choice would be Saturday, September 18th.

This ad hoc committee recommends that the following program be conducted:

9 a.m. to 1 p.m.—Formal presentation of speakers followed by an interchange between speakers and a reaction panel moderated by the Chairman.

The subcommittee further recommended that the afternoon be devoted to recreation in the Newport area, such as golf, tennis, sailing, boating, sight-seeing and that a final session be held in the late afternoon and early evening, which would include the speakers, the Reaction Panel, the committee on Continuing Medical Education, invited educational directors from the community hospitals of the State, and certain officials of the Rhode Island Medical Society.

The purpose of the evening session will be to agree upon specific conclusions and recommendations based on the morning program and to stimulate action on the part of the Society and hospitals throughout the State in the field of continuing medical education.

The subcommittee proposed that the following individuals participate: Dr. Clement Brown, Dr. Stephen Goldfinger, Dr. Margaret Klapper, and Dr. Dean Seibert.

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

I will act as chairman of the program and open the proceedings with an introductory review of the program, placing it in perspective and raising basic questions about continuing medical education.

The subcommittee proposed that the Reaction Panel to include the following: Drs. Milton Hamolsky, Bertram H. Buxton, Jr., and Howard Browne from the Committee and Dr. Lawrence Weed from Vermont.

The evening session would include all of the individuals mentioned above, and Dr. William MacDonald, Dr. Richard P. Sexton, Dr. Seebert Goldowsky, Mr. John Farrell, and Mr. Edward J. Lynch for the Society; Dr. Alex Burgess and Mr. John Tierney of the State Health Department; Mr. Wade Johnson and Bishop Kelly for the Hospital Association; and Dean Heber Youngken of U.R.I.

It is anticipated that the State Health Department could pay one-third of the costs, RMP one-third of the costs, and one-third would be paid by the Medical Society and the hospitals.

The report of this subcommittee will not be acted upon officially by the full committee until March 25, 1971.

Respectfully submitted:

HENRY S. M. UHL, M.D.

Chairman

DISASTER COMMITTEE

The Disaster Committee of the Rhode Island Medical Society has agreed to continue the courses for the training of rescue squad workers and allied health personnel in the Management of Medical Emergencies throughout six local regions in the state. In the Greater Providence Area, the course this year will be conducted the first Monday of the month at the Rhode Island Hospital instead of at the Miriam Hospital.

In conjunction with the Emergency Medical Training course, the Committee sponsored, in cooperation with Capt. Ronald Jones of the Cranston Fire and Rescue Squad, an Ice Rescue Demonstration at the Park View Junior High School and the South Lake at Roger Williams Park on Saturday, February 20. The Ice Rescue Demonstration attracted approximately 175 rescue squad workers and allied health personnel.

The Committee is also investigating the feasibility of conducting a program open to all rescue squad workers and allied personnel on the legal implications of emergency medical care.

The Disaster Committee has also agreed to explore the possibility of placing the Emergency

Medical Training course in the hands of an academic institution. The Committee feels that the heavy administration of the course, the expectation that rescue squad workers will be licensed in the future, and the possible financial incentive for rescue squad workers for taking such a course, necessitates this approach. The Committee has met with a representative of Rhode Island Junior College and the Extension Division of the University of Rhode Island and will confer with an official of Brown University before making any decision regarding the future of the program.

The Committee members have also purchased a set of slides from the American College of Surgeons which have proved to be a great value in teaching of the Management of Medical Emergencies. Those slides are available for physicians who wish to use them at the Executive Office. In conjunction with such courses, the Committee has secured wallet size certificates to be presented to those rescue squad workers and allied health personnel who have satisfactorily completed the course.

Except for the cooperation and dedication of the members of the Committee and the participating rescue squad workers, the program could not have reached its current high standard of excellence.

Respectfully submitted:

ROBERT L. CONRAD, M.D.

Chairman

DIABETES COMMITTEE

The Committee on Diabetes of the Rhode Island Medical Society, in cooperation with the Rhode Island Department of Health, held its annual Diabetes Fair at the Cranston Street Armory on October 21, 1970.

The Ball Room of the Armory was used instead of the Drill Shed, and there were no other programs, demonstrations or exhibits, except for the

(Continued on Next Page)

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.

RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

participation of the Chestmobile from the R. I. Department of Health.

This new approach was used for reasons which were explained to the members of the Committee and the agencies who participated in the Diabetes Health Fair in the past.

There were 748 people screened including 57 known diabetics. Of the latter, 16 had elevated blood sugars and were referred to their physicians for further supervision.

Of the 691 non-diabetics tested, 666 were within normal limits, and 25 were positive. As a result of the follow-up on these 25 positives, 8 were found to be non-diabetic; 7 were previously diagnosed diabetics; 3 were lost to follow-up; and 7 new cases of diabetes were uncovered.

The unopette auto-analyzer method was used for the screening and the criteria were 130 mgm per cent one-half after eating, 160 mgm per cent one hour, and 130 mgm per cent two hours after food intake.

The Women's Auxiliary of the Medical Society, under the leadership of Mrs. Noon, supplied volunteers for the registration, and their help and cooperation was very much appreciated.

Laboratory technicians were recruited from St. Joseph's and Rhode Island Hospitals and these volunteers gave very valuable service to this project.

Chest x-rays taken on the same day by the Department of Health Chestmobile totaled 261, of which two were reported "suspected other (non-tubercular) chest diseases." (See Appendix A.)

A second event worthy of reporting is the Diabetes Detection Drive during National Diabetes Week in November, sponsored by the American Diabetes Association.

The events of the week included:

An "open house" on the offices of the R. I. Department of Health Division of Chronic

Disease where 610 people were screened and 10 new cases of diabetes uncovered;

A Diabetes Fair at Midland Mall in Warwick where 1,107 people were screened and 11 new cases of diabetes were found; and

Urine testing for sugar with the Drey-Pak in 35 industrial plants. (A breakdown of the industries is detailed in Appendix B.)

These events resulted in a total of 4,610 people screened for diabetes and a total of 49 new cases of diabetes uncovered.

The continuing year-round diabetes screening program sponsored by the R. I. Department of Health, in cooperation with the R. I. Medical Society, screened 12,645 people in fiscal year 1969-1970, and uncovered 168 new cases of diabetes now under the medical supervision of their physicians.

Because of the poor attendance at this year's Diabetes Fair as compared to previous years, it is time to give serious thought to another location for the Fair in 1971.

Respectfully submitted:

JEAN M. MAYNARD, M.D.
Chairman

Diabetes Fair
Cranston Armory
APPENDIX A
October 21, 1970
Total: 261

RHODE ISLAND DEPARTMENT OF HEALTH

Division of Chest Diseases

RESULTS OF X-RAY CASEFINDING PROGRAM

| | | |
|---|--------|--------|
| Total X-rays taken | 261 | |
| Less Technically unsatisfactory X-rays .. | 0 | |
| Total Satisfactory X-rays taken | 261 | |
| | Retake | Retake |
| | not | Retake |
| | Recom- | Recom- |
| | mended | mended |
| Essentially negative | 259 | ... |
| Total Abnormal Findings | 2 | ... |
| Pulmonary TB | ... | ... |
| Questionable Pul. TB | ... | ... |
| Calcified Scar | ... | ... |
| Suspected Cardiovascular Dis. | ... | ... |
| Suspected Malignancy | ... | ... |
| Suspected Other (Non-Tubercular | | |
| Chest Diseases | 2 | ... |

APPENDIX B

To: Rhode Island Occupational Health Nurses
From: Marjorie Wilbur, R.N.
Rhode Island State Department of Health
Division of Occupational Health
272 State Office Building
Providence, Rhode Island 02903
Date: February 1971
Re: Report: Diabetes Detection Week,
November 1970

AUTO BURGLAR
ALARMS

\$7.95 up

CUSTOM
Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

During Diabetes Detection Week, November, 1970, urinalyses by the Drey-Pak process were performed for employees in thirty-five plants. 2,508, or 37.9% of the Drey-Paks distributed, were returned to the Rhode Island Health Department Laboratory. 110 were found to be positive for sugar and the individuals involved were notified. All but 25 of these people have had additional tests and/or have seen their physicians. 22 *new diabetics have been diagnosed*. As in the past, the greatest number (12) have occurred in the 45-64 years of age category. The youngest found was an eleven year old boy with a family history of diabetes.

In addition to the above 35 plants, urinalyses were performed by nurses in 2 other plants. In one, 60 urinalyses performed with Clinitest were negative. In the other, 3 of 94 employees were later diagnosed diabetic after having positive urinalyses when tested with Combistix.

In one plant Unopet blood tests were performed on 231 employees. Three of these were found to be diabetic.

Plants which participated in Diabetes Detection Week activities are as follows:

American Insulated Wire Co.
Anson, Inc.
B. A. Ballou & Co., Inc.
Bostitch, Inc.
Brown & Sharpe Mfg Co.
Bulova Watch Co., Inc. (Dexter Street)
Bulova Watch Co., Inc. (Warwick)
Cable Electric Co.
Community Workshops of R. I., Inc.
Converse Rubber Co.
Coro, Inc.
A. T. Cross Co.
Federal Products Corporation
General Electric Co. (Providence Base Works)
General Electric Co. (Wiring Dev. Dept.)
General Electric Co. (Newport)
Grinnell Corporation
William H Haskell Co.
Hassenfeld Bros., Inc.
J & K Sales Co., Inc.
Jordan Marsh
Leesona Corporation
Leviton Mfg. Co.
M. F. B. Mutual Insurance Co.
Mine Safety Appliance Co.
George C. Moore Co.
Narragansett Brewing Co.
Newman-Crosby Steel Co.
Providence Journal-Bulletin
Providence Washington Insurance Co.
Raytheon Co.
Rhode Island Hospital
Rhode Island Hospital National Bank
G. T. Schjeldahl Co.
Speidel Corporation
Trifari. Krussman & Fischel, Inc.
Uncas Manufacturing Co.

INDUSTRIAL HEALTH COMMITTEE

The Industrial Health Committee of the Rhode Island Medical Society has been diligently at work in preparing legislative amendments to the current Workman's Compensation Act. Under the guidance of Dr. Mendell Robinson and the Otolaryngological Society, the committee has received 7 legislative proposals to the present statute. They are as follows:

1. *Employer Liability*: Employee shall have worked for such employer for a total period of at least ninety (90) days in an area of harmful noise.

2. The last employer whose employment has contributed to the employee's occupational deafness shall be liable for the full extent of the employee's deafness unless such employer shall establish by competent evidence (including the result of a professionally controlled hearing test) the extent of the employee's deafness as it existed prior to exposure to harmful noise in the employer's employment. Upon such showing the employer shall be liable to the employee only for the proportion of the deafness attributable to the employment by him.

3. Hearing tests conducted by a *competent medical specialist* after the employee has been removed from a noisy environment for a period of SIX MONTHS shall be performed to determine the degree of permanent disability.

4. No benefits shall be payable for *temporary* total or *temporary* partial disability under this act for loss of hearing due to prolonged exposure to noise.

5. The "date of injury" shall be any of the following events:

- a. Transfer to non-noisy environment by an employer.
- b. Retirement.
- c. Termination of employer-employee relationship.
- d. Layoff.

(Continued on Next Page)

EAST SIDE- MEDWAY STREET

Across street Wayland Square stores parking lot. New modern prestige brick 4 office suite medical building. Designed for doctors. Parking, private entrance and exit, air conditioned, paneled, carpeting, separate waiting and examination rooms.

231-7910

6. There shall be payable as permanent disability for *total* occupational deafness of both ears 200 weeks of compensation (in lieu of 100 weeks of compensation), as this is the amount of compensation provided for the complete loss of hearing of both ears due to external trauma. (Section 28-33-19, Paragraph 1.)

7. The amount of hearing loss in determining degree of disability should be reduced by the average amount of hearing loss as a result of non-occupational causes that may be found in the employee as a result of concomitant disease in addition to the aging factor.

The committee has concurred that the amendments should be put into legislative draft and introduced into the General Assembly at this session. The legislative recommendations were presented to the greater Providence legislators at a meeting in February and subsequent to that presentation the committee has reviewed and approved the amendments.

The committee has also endorsed a new proposal for a coronary detection and work evaluation program at Our Lady of Fatima Hospital. The committee believes that such a program would fill an apparent void in this field for the people of Rhode Island.

Respectfully submitted:

ROBERT P. SARNI, M.D.

Chairman

LIBRARY COMMITTEE

The Library Committee holds two meetings a year. The October meeting was reported to the House of Delegates in January. Our second meeting was held on March 11, 1971.

We discussed the Medical Library Assistance Grant and the Rhode Island Foundation funds for renovation and construction of the rare book room. We approved a large number of new books for the Adelson, Davenport, Day, and Rogers Funds and chose a few titles in veterinary medicine to be purchased with the money provided for that purpose annually by the Rhode Island Veterinary Medical Association.

OFFICE FOR RENT

Barrington; new brick building 1,000 sq. ft. carpeted ample parking; two schools within 200 yds; ideal for pediatrician or other physician.

Call George Vican

783-2400

We thanked the Librarian and the Assistant Librarian for their efficient running of the Library. We adjourned in good season.

Respectfully submitted:

HAROLD G. CALDER, M.D.

Chairman

Librarian's Report

First of all, I thank you for the rare book room with my name thereon! I imagine that very few librarians are so honored before retirement. The room is almost ready and it will be my pleasure to fill it with our treasures this summer when we shall have more time for polishing and proper shelving. These volumes have been a special interest since Dr. Herbert Partridge first showed a novice how to recognize an important title.

Summing Up and Random Thought, 1970-1971:

We have had 2,335 readers (884 physicians; 1,451 laymen) this year. Of course, this warm-body count isn't an accurate index of library use as it doesn't include our xeroxing figures (1,261 articles; 7,646 pages. Most of these articles were mailed to invisible patrons.

Circulation figures, in addition to photocopies, were 366 books (79 from the Davenport Collection) and 956 periodicals borrowed. Our accession figures added up to 570 books received through purchase, gift, review, binding, and exchange plus gifts of journals, instruments, pamphlets, photographs, and phonograph records. We made 191 literature searches. We are receiving 461 serials and periodicals. The Medical Library Resource Continuation Grant for 1970-1971 amounted to \$3,255.00 and is being spent on microfilming and binding. To date, our three years of grants have enabled us to put 469 volumes on microfilm. We have received 569 single issues and 5 bound volumes of journals through the Medical Library Association Exchange. In return, we have given other libraries 53 books and 733 journals and are in the process of mailing duplicates offered on three lists in the Exchange. Items catalogued to date are 36,938 books and bound volumes, 6,850 unbound volumes, and 2,395 pamphlets, with many still to be processed. We requested 147 items from other libraries for our readers.

In 1953, the medical librarians in this area produced the first edition of a *Union List of Periodicals* received currently in ten local libraries. The List was 29 pages in length. In 1970, our sixth edition was published by twenty-three cooperating libraries and it is 249 pages in length. It was printed by Brown University under the direction

of Mrs. Carson, Librarian of the Biological Sciences Library. This is but one example of libraries living in each others' pockets as we do increasingly. Medical, academic, public, and special libraries are in constant communication in order to provide the best possible service for the whole community.

Our young students still ask for information on smoking, but this year's favorite subjects are anatomy and physiology of the human body, whole or in part, "with lots of pitchers" as one lad wrote. There has been an increase in interest in medical history in both the young and graduate student readers.

Other activities included attendance at several stimulating meetings (New England Medical Library Association, Rhode Island Library Association, American Medical Association, Advisory Council for the Providence Interrelated Library System), "explaining" our Library to classes from the URI Graduate Library School and Bryant College, and being subpoenaed twice.

This could be called the year of the three "Cs" — cataloging, clean-up, and copy machine. Miss Patrucco, Assistant Librarian, has been doing yeoman labor in catching up with our backlog of uncatalogued material. The Librarian took advantage of several stormy Sundays to clean out the storeroom, prepare journals for microfilming, and other dungaree-type jobs. Miss Judith Delahunt, our summer employee, was a willing and efficient helper. And we thank the Executive Office staff for their help, too. It has been a good year.

HELEN E. DEJONG,
Librarian

POLLUTION COMMITTEE

The Pollution Committee of the Society has met and reviewed approximately forty bills currently in the Rhode Island General Assembly. The Committee has taken favorable action on the following bills:

This bill would empower the Governor to proclaim several levels of air pollution dangers and to issue orders to control the pollution.

This measure would bring under the pesticide control act a ban on sale, use, transportation and storage of trichlorophenoxy acetate and dichlorophenoxy acetate.

This bill would extend to industrial, commercial, and institutional operations the state ban on open burning.

This measure would remove the exemption for attended incinerators or rubbish burners from the

ban on open burning and would increase the maximum fine for violation from \$100 to \$500.

This bill would create a Rhode Island Sanitary Waste Disposal Authority and would provide for its powers and duties and would appropriate \$25,000 for initial financing.

An act which would require that motor vehicle statutory inspections include the exhaust system for excessive pollutants.

* * *

The Committee will meet again in May and will discuss air pollution matters with a representative from Ecology Action for Rhode Island. The Committee is also seeking information from knowledgeable persons on the medical aspects of pollution and is attempting to secure information on studies made on Narragansett Bay.

Respectfully submitted:

EDWARD L. GOULD, M.D.
Chairman

PUBLIC LAWS

The Public Laws Committee has met and taken action on the following bills before the General Assembly:

Approved

A bill would exempt those rendering emergency care to persons injured in an accident from civil liability for ordinary negligence. The immunity would not apply where there is gross, wilful or wanton negligence.

* * *

A bill would require prescription labels to contain instructions for the use of the prescribed item and the names in full of the physician and patient, effective October 1, 1971.

Opposed

A bill would include within the definition of "Medical Services" services rendered by a chiropractor so as to enable a chiropractor to be paid by any non-profit medical service corporation.

* * *

A measure would provide for the issuance of state registration numbers to those authorized to prescribe narcotics and would require the state registration number to appear on every such prescription.

* * *

A resolution would limit issuance of chauffeur's driving licenses for those passing a physical examination within 39 days prior to application and limiting renewals, effective in 1972, for those passing a physical examination every three years.

* * *

(Continued on Next Page)

This legislation would amend the statutory definition of the practice of Optometry and would allow optometrists to use drugs, including topical anesthetics on the eye to diagnose diseased conditions and pathological abnormalities.

* * *

Other bills which the Committee commented on:

An act would provide civil liability for acceptance or publishing price advertising for alcoholic beverages within Rhode Island. Violation of the act would result in civil liability to the liquor control administrator or \$500 for each violation.

The Public Laws Committee forwarded a copy of the Liquor Resolution adopted by the House of Delegates of the Rhode Island Medical Society, at its meeting of January 20, 1971.

* * *

The Public Laws Committee notes that two district medical societies, Providence and Washington, have met with their area legislators to discuss health-medical legislation. We urge those societies which have not yet planned to meet with their area legislators to do so. The Committee on Public Laws feels that such a conference provides an excellent educational means to acquaint the legislator with the position of the society on various measures currently in the General Assembly.

Respectfully submitted:

ARMAND D. VERSACI, M.D.
Chairman

SCIENTIFIC WORK AND ANNUAL MEETING COMMITTEE

Greetings: Walter C. Bornemeier,
M.D., President American Medical Association.

* * *

Dancing during dinner hour, and after formal evening program, to the music of the Ralph Stuart's Orchestra.

Respectfully submitted:

ROBERT P. DAVIS, M.D.
Chairman

The Scientific Work and Annual Meeting Committee has completed the following program for the 160th Annual Scientific Assembly at the Providence Biltmore Hotel on Saturday, April 24, 1971.

Theme: *Medical Manpower Problems and Possible Solutions*

* * *

12 Noon—Buffet Luncheon, Garden Room, Biltmore Hotel, (advance reservations required).

1:00 p. m.—Call to Order.

Richard P. Sexton, M.D., President,
R. I. Medical Society, presiding.

* * *

*30th Charles V. Chapin Oration:
"Doctors and Patients"*

Orator: Eugene Anson Stead, Jr., M.D., of
Durham, North Carolina.

2:15 p.m.—Presidential Address.

Richard P. Sexton, M.D.

2:45 p.m.—Business Meeting of the Society.

* * *

3:00 p.m.—*Panel Presentation on Manpower
Issues.*

Presiding: Robert P. Davis, M.D.,
Chairman, Scientific Work and Annual
Meeting Committee, Rhode Island
Medical Society.

Panelists:

WALTER C. BORNEMEIER, M.D., *President,
American Medical Association, Chicago, Illinois.*

BELLA STRAUSS, M.D., *Associate Professor
of Medicine, Dartmouth Medical School, and
Deputy Director of Medex Program.*

THELMA INGLES, *of the Rockefeller Founda-
tion, New York City.*

DR. HEBER YOUNGKEN, *Dean of the School
of Pharmacology, URI.*

4:30 p.m.—Audience participation. Questions
directed to panelists.

5:00 p.m.—Recess.

6:30 p.m.—Reception and social hour. Ballroom
foyer, 17th floor, Biltmore Hotel.

7:30 p.m.—Dinner in ballroom. (Dress informal.)
Citation to President Sexton.

MENTAL HEALTH COMMITTEE

The Mental Health Committee has been in the process of reviewing all legislation concerning drug prescriptions and drug abuse, along with developing a comprehensive paper to be used for public education.

At that point the progress of this work was interrupted by the resignation of the Chairman of the Subcommittee on Drugs, Roswell Johnson, M.D., as a consequence of an unsigned editorial in the January, 1971 issue of the RHODE ISLAND MEDICAL JOURNAL. This editorial contained an unwarranted, thinly disguised, personal attack on Doctor Johnson. It also reflected a completely distorted picture of his views, the exact opposite of those he had previously published in the RHODE ISLAND MEDICAL JOURNAL at its invitation. Under

these circumstances, Doctor Johnson submitted that he could not effectively fulfill his task.

At its meeting on March 17, 1971, a motion was made and unanimously adopted that the Mental Health Committee not accept Doctor Johnson's resignation; that it express its full and complete confidence in him and in his qualifications to fulfill his charge. The Committee also expressed its dismay at the occurrence described above. It was moved and unanimously adopted to request that Doctor Sexton contact Doctor Johnson to ask him to remain as Chairman of the Drug Subcommittee, so as to make it possible for this subcommittee to continue its work in the most effective manner.

Regarding several items of pending legislation, the Committee adopted a position of respective support or opposition, which will be forwarded to the attention of the specific General Assembly committee where the bill resides.

Respectfully submitted:
HUGO TAUSSIG, M.D.
Chairman



**IMPACT ON RHODE ISLAND OF A
MEDICAL SCHOOL AT BROWN
UNIVERSITY**

(Concluded From Page 309)

- c. To continue the current six-year MMS Program, leading to transfer into the third year of another medical school.
- d. To reduce the current program to a four and one half year B.S.-M.S. Program, leading to transfer into the second year of another medical school.
- e. To phase out the current program leaving only a strong premedical program.

These options are under consideration at the present time.

Lest it sound as though this envisioned medical school at Brown is strictly Ivy-league, topdrawer, or sectarian, let me say that an open-door policy is already being discussed to encourage transfer of students, perhaps after the second or third year of college at the University of Rhode Island, Providence College, out-of-state colleges or universities, and the various junior colleges, to the medical school. Course changes at these undergraduate institutions are already being made.

Finally, an M.D. degree will not be granted in the State of Rhode Island this year, or next, but undoubtedly in the near future. Such a program will need planning and discussion. It will

primarily require community support, which will come from educating the populace to the need, the benefits, and the resultant improvement in medical manpower and medical care in this State.



POSTAGE STAMPS IN MEDICINE

By FRANCESCO RONCHESE, M.D.

A stamp was issued by Uruguay in 1969 to honor pediatrician Louis Morquio who left his name to the disease or syndrome also called *Dysostosis enchondralis meta-epiphysaria* (Sur une forme de dystrophie osseuse familiale, Archives Medicine des Enfants 32:129, 1929).



Similar observations were made in 1929 by Brailsford (Am. J. Surg. 7:404, 1929). The syndrome goes also under the name of Morquio-Brailsford Syndrome.

Of semantic interest is that Louis Morquio was born Luigi Morchio in Genoa, Italy in 1867. In Uruguay he modified the spelling of his name from Morchio to Morquio because he wanted the Uruguayans to pronounce it the Italian way.

(from: De Toni, Vitalità, April 1970)



**SEXUAL MANIACS TREATED WITH FEMALE
HORMONES**

According to Il Nostro Mondo (December 1968) 40 men in a British jail for sexual attacks on children experienced a diminution of their sexual impulse after injections of female hormones.

... Courtesy Francesco Ronchese, M.D.



MEDEX: A REGIONAL EXPERIMENT

(Concluded From Page 320)

pared to evaluate its program in two ways, first by measuring the impact of the Medex on the preceptor and the practice, and second, by assessing the Medex performance at the preceptor site. We feel capable of measuring Medex performance because we have structured, as described, the substance and the limits of his activities. The initial effort in these areas has taken place. It will continue at appropriate intervals throughout the twelve months the Medex are in the field phase.

MEDEX-New England ultimately will be contrasted with MEDEX in Washington, California, North Dakota, and Alabama, as well as with other physician assistant programs. But there is at hand a situation which will permit a more immediate comparison between the Duke Program and MEDEX. In nearby Vermont a physician has in his employ a Duke trained Physician's Assistant and simultaneously is serving as a preceptor of a Medex trained in MEDEX-New England. This special circumstance, certainly without duplication in this part of the world, should provide data which will obligate us to take a long hard look at the Duke Program versus the MEDEX-New England curriculum.

FURTHER REFINEMENTS

In closing, some remarks are in order about reasonable next steps which might be taken in this New England experiment in four handed medicine. Certainly, there are three important ways in which we should be reflecting upon our current experience. First, we have learned that the special academic environment can provide direct enrichment of the practical, or preceptor community environment through teaching of the skills in which it excels. We must, therefore, continue to experiment with the breadth of substance of the contribution of the academic center to what may be characterized essentially as a field program and with the most telling modes of delivery of that teaching. Second, the MEDEX Project in order to survive must assume a sustained stance of sensitivity to the unfolding program as it is played out in the preceptor community, for without this alertness no reasonable or realistic modification, extension, or retrenchment in the basic design can occur. Finally, MEDEX need not relate solely to medical education centers and indeed should not. The regional community colleges and vocational and technical schools of New England (to date untapped with respect to their potential contribu-

tion to such a venture as MEDEX) can share with us exploration of the multiple ways in which their multiple resources can be utilized in the maintenance and refinement and extension of some of the technical skills which constitute so important a part of the Medex armamentarium.

REFERENCES

- ¹Sox H, Sox C., and Tompkins R: Clinical Algorithm, Copyright by the Trustees of Dartmouth College 1971
- ²Berger C, and Tufo H: The Clinical Algorithm Concept; unpublished data



MEDICAL CARE FOR TOMORROW

(Concluded From Page 312)

Greater welfare funds should be available when needed. Good prenatal attention and education in sanitation are priorities. All of these factors will increase the possibility of delivering a healthy baby at term instead of a premature or otherwise unhealthy child. And we will save money in the long run by reducing the incidence of the retarded and slow learners. Every child has the right to be born healthy, and, if he is born healthy, the infant mortality rate will go down, and we shall have healthier, smarter youngsters.

PARTNERSHIP WITH GOVERNMENT

You will notice that in many of the areas that I have discussed we cannot work alone. For the medical centers and maternity centers we need a partnership with the government. In some areas this could be by purchase of health insurance for the poor, as the AMA proposes in our Medcredit plan. For the maternity centers, we will need money for facilities. We are no longer afraid of the government. Congress has learned that their schemes are the costliest and most inefficient. I'm sure they will listen if we conduct ourselves as reasonable men, willing to work in a partnership with the government in solving the problems of our people.

There is room for improvement. Health care can be improved. It is being improved. Improvement *will* be speeded up so that we will, within this decade, have enough doctors and one level of medical care readily available to all, provided in a manner that is suitable to the people of the United States.



RHODE island MEDICAL JOURNAL

| | |
|--|-----|
| The 30th Charles V. Chapin Oration: PATIENTS AND DOCTORS Eugene A. Stead, Jr., M.D. | 355 |
| Fiske Fund Prize Essay For 1971: UTILIZATION OF IN VITRO SOMATIC CELL CULTURES FOR GENETIC ANALYSIS Robert John DeLorenzo | 359 |
| 13th Murray S. Danforth Oration: THE PAINFUL SHOULDER DUE TO ROTATOR CUFF TENDINITIS Ian Macnab, F.R.C.S. | 367 |
| EDITORIALS | 375 |
| BOOK REVIEW | 376 |
| DERMAQUIZ | 344 |
| DISTRICT MEDICAL SOCIETY MEETINGS | 343 |
| EDITOR'S MAILBOX | 377 |
| PERIPATETICS | 348 |

COVER: Dr. Charles V. Chapin died in 1941. Subsequently Dr. Charles F. Gormly, President of the Rhode Island Medical Society in 1943, recommended the establishment of an oration to be delivered at each annual meeting and designated the Charles V. Chapin Oration. Two years later, at the suggestion of Dr. John G. Walsh, the City of Providence was invited to participate by awarding a medal (see cover). The Society paid for the first two Chapin Medals; since then the City of Providence has annually appropriated funds to purchase and award this silver medallion to honor Doctor Chapin's memory. (Photos courtesy of Gorham Division of Textron)

EDITORIAL STAFF

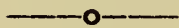
EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

District Medical Society Meetings

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library on Monday, March 1, 1971. The meeting was called to order by the President, Dr. David Freedman, at 8:30 p.m.

MINUTES OF PREVIOUS MEETING

Since the minutes of the February meeting of the Association are to be published in the R. I. Medical Journal, Doctor Freedman announced that a reading of them would be omitted, unless there was a request.

REPORT OF THE SECRETARY

In the absence of the Secretary, Dr. Joseph E. Caruolo, Vice-President, read the Secretary's report, as follows:

At a recent meeting of the Executive Committee the following actions were taken:

1. The President was authorized to appoint a committee to consider the alternatives available for funding medical care, including the possibility of setting up a Foundation under the sponsorship of the Providence Medical Association or the Rhode Island Medical Society.
2. The President was authorized to name a committee to consider a poll of the membership in regard to the broad range of feeling on the subject of abortion legislation, seeking both a valid statistical interpretation of both the range of feelings and the appropriateness of sponsoring of legislation.
3. The following physicians were recommended for election to active membership in the Association:

Frederick Elias, M.D.

Barbara Fritz, M.D.

Avis Kow, M.D.

Domenic Petronio, M.D.

Richard B. Turner, M.D.

Action: A motion was made, seconded and voted that the report of the Secretary be received and approved, and that the nominees

for membership be declared elected to active membership.

ANNOUNCEMENTS BY THE PRESIDENT

Doctor Freedman called attention to the April 5, 1971 meeting of the Association which will be addressed by Dr. Banice Webber and Mr. Lawrence A. Hill, Executive Director of Rhode Island Hospital, on the subject "Relationships and Responsibilities Between Hospitals and Their Physicians."

SCIENTIFIC PROGRAM

Doctor Freedman introduced the guest speaker, Mr. Howard Cook, Assistant Director of the Washington Office of the American Medical Association, who discussed the work of the AMA Washington Office, as well as the subject of National Health Insurance, outlining the major factors in the various federal proposals for health care now before the Congress. He answered many questions posed by the audience.

Respectfully submitted:

JOHN E. FARRELL, Sc.D.

Executive Secretary

Collation was served.

Attendance: 56.

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library on Monday, April 5, 1971. The meeting was called to order by the Vice-President, Dr. Joseph E. Caruolo, in the absence of the President, Dr. David Freedman.

MINUTES OF PREVIOUS MEETING

Doctor Caruolo noted that the minutes of the March meeting would be published in the R. I. Medical Journal, and therefore a reading of them would be omitted.

REPORT OF THE SECRETARY

In the absence of Dr. Thomas Head, Secretary, Doctor Caruolo reported that the Executive Committee recommended for election the following physicians:

(Continued on Page 346)

DERMAQUIZ
Conducted by **FRANCESCO RONCHESE, M.D.**



(left) Black, pin-point-size dots on a Negro woman's face.

Durations: years. No feelings.



(right) Black, pin-point-size dots on a white man's chest.

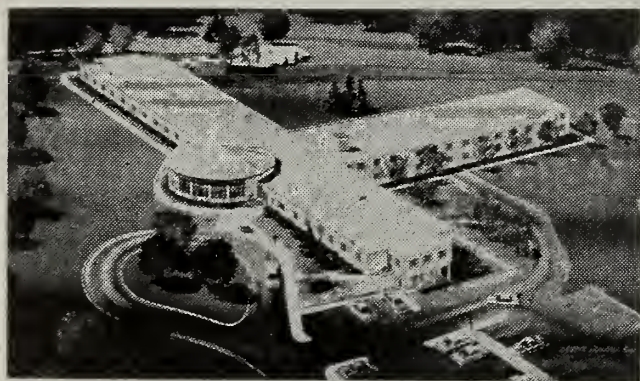
Duration: months. Very itching.

Answer on Page 386.

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

Active Medical Staff — Registered
Professional Nurses on All Shifts

SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy

For Information — Call 944-8500

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a **special message.**

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

215 WATERMAN AVE.

East Providence, R. I. 02914

Phone (401) 438-0660

The all-day, all-night summer cold and allergy pill.

Novahistine LP can give your patients the convenience of twice-a-day dosage—morning and bedtime—along with prompt relief from the symptoms of allergic rhinitis, hay fever or summer colds. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. Even when nasal congestion is the result of repeated allergic episodes, patients can usually enjoy around-the-clock relief. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine[®]
LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)



THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

**A telephone consultation service
exclusively for physicians**

WARM LINE

clinical management/ drug abuse crises

Practicing physicians can expect to be confronted at almost any time with a medical crisis related to the misuse of psychoactive drug substances. Increasing numbers of people are misusing these drugs and a dramatic increase in the number of drug-related medical crises has been noted during the past several years.

Although much information on this subject has been disseminated, the need for practical advice on basic clinical management of these crises has become greater.

Three physicians, each of whom has had extensive practical experience in dealing with drug abuse problems, have created a series of three-minute audiotapes detailing basic medical approaches to the most frequently encountered drug abuse crises.

Dr. David E. Smith is Director of the Haight-Ashbury Medical Clinic in San Francisco, California, and Assistant Clinical Professor of Toxicology, University of California Medical Center at San Francisco.

Dr. William Abruzzi was Medical Director of both the Woodstock and Powder Ridge Rock Festivals and is currently the College Physician, State University of New York at New Paltz, New York.

Dr. Edward C. Senay is the Director of Clinical Research for the Illinois Drug Abuse Program and Associate Professor of Psychiatry at the University of Chicago School of Medicine, Chicago, Illinois.

Their taped discussions are on automatic telephone equipment for utilization at all times. The opinions given regarding treatment modalities are those of the physician speaking.

| | |
|----------------------|----------------------------|
| Amphetamines | Dr. David E. Smith |
| Hallucinogens | Dr. William Abruzzi |
| Opiates | Dr. Edward C. Senay |

For further information, contact your Roche Representative or write:

**Department of Professional Services
CM/DAC
Roche Laboratories
Division of Hoffmann - La Roche Inc.
Nutley, New Jersey 07110**

DISTRICT MEDICAL SOCIETY MEETINGS

(Continued From Page 343)

Sylvia Lauro, M.D.

Naemuddin Siddiquie, M.D.

Ralph Meich, M.D.

Action: A motion was made, seconded and voted that the physicians nominated be elected to active membership.

* * *

Doctor Caruolo explained that several other applications received by the Committee were not yet completed, and therefore could not be presented.

Action: A motion was made, seconded and voted that action upon these applications be withheld until the next meeting.

ANNOUNCEMENTS BY THE PRESIDENT

Doctor Caruolo announced that the 160th Annual Meeting of the Rhode Island Medical Society would be held at the Providence Biltmore Hotel on Saturday, April 24, 1971. He noted that Dr. Eugene Stead of North Carolina would give the Chapin Oration on the subject: "Doctors and Patients", and that an outstanding panel including Dr. Walter C. Bornemeier, President of the American Medical Association, would discuss Medical Manpower Problems and Possible Solutions.

He urged every member of the Association to support this meeting.

CERTIFICATES OF MEMBERSHIP

Doctor Caruolo observed that Doctor Head, Secretary of the Association, departed on vacation before the membership certificates were prepared for his signature. It was therefore agreed that the Providence Medical Association member certificates would be mailed to the new members elected last month. However, the Rhode Island Medical Society certificates of membership were given to the members of the Association elected at the March meeting.

DECEASED MEMBERS

Doctor Caruolo stated that within the past month three members have died: Drs. Nora P. Gillis, William L. Leet, and Edward S. Cameron. He called for a moment of silent prayer in memory of these physicians.

SCIENTIFIC PROGRAM

Doctor Caruolo introduced Dr. Banice Webber, a surgeon at The Miriam Hospital and the first speaker on the program, to discuss the subject "Relationships and Responsibilities Between Hospitals and Their Physicians." Doctor Webber initiated his address by pointing out his belief that the main role of both the hospital and the physician was high quality patient care. Doctor Webber

(Continued on Page 347)

DISTRICT MEDICAL SOCIETY MEETINGS

(Concluded From Page 346)

traced the traditional responsibilities of the hospital to the physicians, including the high standard of quality care, the staff educational environment, and the governing board maintaining medical staff freedom, including the provision of the avenues of appropriate communication. In discussing the responsibility of the physician to the hospital, Doctor Webber pointed out the proper utilization of the physician considering his own conscience, the self-regulating mechanisms such as tissue, and peer review committees and a proper interplay of the physician in the hospital-patient-community relationship.

Doctor Webber indicated that the role of the physician in decision making activities of the hospital has been an emerging one in the last 40 years. A physician no longer functions as an independent community agent.

Doctor Webber presented a review of the traditional factors governing the relation of physicians with the hospital. He pointed out some potential areas for improving the physician-hospital relationship.

Mr. Lawrence A. Hill, Vice President for Operations at Rhode Island Hospital, reviewed three major historical eras of hospital-doctor relationship in the past century. He said that from 1850-1900, the hospital functioned as a passive institution with physicians providing patients and medical care. From 1900-1940 was an era of the hospital as a "doctor's workshop". Following World War II the relationship changed markedly, affected by such new entities as third party payors, vocal poor, employees and the House staff. Mr. Hill also expressed his belief that the public expects "great things" of hospitals and he thought that the contemporary physician had similar public pressures applied to him. He expressed the view of the hospital as considerably more than a passive receptacle for patients.

Internally, Mr. Hill expressed favor of the allocation of resources by management and medical staff as a partnership. While the method of arriving at goals by management and staff were not in every case coincidental, he believed there was agreement on the goals themselves. He expressed dissatisfaction with the concept of an adversary type confrontation characterized by gaining "across the table". He referred to the Anderson thesis whereby staff would set out to achieve as many

resources as it could while the hospital would function to conserve community resources as the guardian thereof. Mr. Hill said that he felt this thesis not tenable and he outlined his reasons.

* * *

There was general discussion from the floor.

* * *

The meeting was adjourned at 10 p.m.

Respectfully submitted:

JOHN LAWLOR

Acting Secretary

Collation was served.

Attendance: 52.



OFFICE FOR RENT

Barrington; new brick building 1,000 sq. ft. carpeted ample parking; two schools within 200 yds; ideal for pediatrician or other physician.

Call George Vican

783-2400

Ulcer Re- lief!

Dicarbosil®

ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Peripatetics

GUNNAR NIRK and HUGO TAUSSIG have been installed as Fellows of the American Psychiatric Association at its annual meeting in Washington, D.C.

* * *

ALEX M. BURGESS, Director of Medical Education at The Miriam Hospital, who observed his 85th birthday May 4, was inducted into the Rhode Island Heritage Hall of Fame at the 6th Annual Awards Dinner of the organization, May 18.

* * *

MAX FAINTYCH, Associate Psychiatrist at Butler Hospital, has been re-elected President of the Staff Association. This is the second term for Doctor Faintych.

Also renamed were GABRIEL A. NAJERA, Vice-President; and WILMA ROSEN, Secretary-Treasurer. Both Doctors Najera and Rosen are members of the associate psychiatric staff.

Two new members-at-large were elected. They are MELVIN D. HOFFMAN, an Associate in Internal Medicine; and NICHOLAS NUNEZ, staff psychiatrist.

* * *

FRANCIS CHAFEE has been elected President

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

31st Annual AMA Congress on OCCUPATIONAL HEALTH

AUGUST 29-30, 1971

Jackson Lake Lodge in
Grand Teton National Park, Wyoming

of the Rhode Island Society of Allergy at its annual meeting. GUY A. SETTIPANE was named Secretary-Treasurer.

* * *

DONALD FITZPATRICK, President-Elect of the Rhode Island Society of Internal Medicine, was recently delegate to the American Society of Internal Medicine Meetings in Denver, Colorado. Other officers of the local society in attendance were JOHN PINTO, RICHARD BARONIAN, and ROBERT V. LEWIS.

Meeting sequentially at Denver was the American College of Physicians where the Governor for Rhode Island, WILLIAM J. H. FISCHER, headed the Rhode Island delegation. MARSHALL FULTON, former Governor for Rhode Island and former Regent of the College was awarded a Mastership and the Alfred Stengel Memorial Award for his outstanding service to the college. BENJIL L. SCHIFF and ALDEN H. BLACKMAN were elected to Fellowship.

* * *

Two officers of the Rhode Island Blue Shield Board of Directors were named to national positions at the annual meeting of the National Association of Blue Shield Plans on March 5. They are ARNOLD PORTER, President of the Local Plan. He will serve a two-year term representing Blue Shield Plans in the New England District. JUDGE FLORENCE K. MURRAY of Newport, Associate Justice of the Rhode Island Superior Court, has been named Vice Speaker of the 1971 NABSP Program Conference, which will be held in Washington in October.

NABSP coordinates the national efforts of the local Blue Shield Plans in the fields of marketing, research, communications, and federal legislation.

* * *

The Providence Surgical Society has elected the following officers for the coming year. They are: President, STEPHEN J. HOYE; Vice-President, RICHARD DYER; Secretary, JOSEPH E. CARUOLO; Treasurer, JESSE P. EDDY III. Counsellors are: THOMAS PERRY, JR., ARNOLD PORTER, DAVID FREEDMAN, LEONARD STAUDINGER, and ERMINIO CARDI.

* * *

A. A. SAVASTANO, Surgeon-in-Chief, Department of Orthopedic Surgery and Fractures, attended a combination meeting of the American
(Continued on Page 353)

the quality of survival

With the steady improvement in the therapy of cancer, and consequent increase in the number of 5-year survivals, our programs reflect increasing concern with the future of the cancer patient—with the *quality* of his survival.


High priority is being given to the rehabilitation of cancer patients—those having had mastectomies, colostomies, laryngectomies, amputations, and other drastic treatments for cancer.

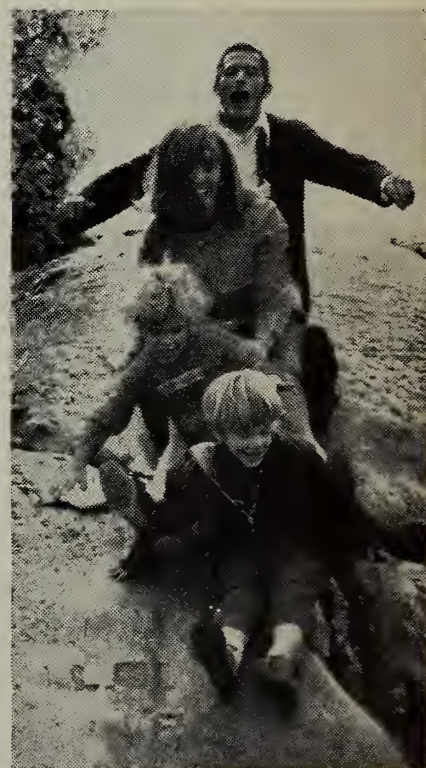
Our “Reach to Recovery” program is a dramatic example. This program helps the physician meet many special needs of the postmastectomy patient on the road to total recovery. Patients receive psychological reassurance and practical help from women who have had the same surgery.

The laryngectomee also receives the benefit of our rehabilitation program. Supported

by the Society, the International Association of Laryngectomees, through its local IAL clubs, provides such services as individual and group speech therapy, psychological counseling, visits to new patients, safety training, public education and social activities.

Our rehabilitation programs not only give heart and help to patients but provide the physician with vital aids necessary to improve the *quality* of survival.

American Cancer Society 



When irritable colon feels like this



PERIPATETICS

(Concluded From Page 348)

College of Sports Medicine and the Canadian College of Sports Medicine in Toronto, Canada. Doctor Savastano read a paper on "Recurrent Dislocation of Peroneal Tendons".

Doctor Savastano has recently been elected President of the Boston Orthopedic Club.

* * *

HENRY T. RANDALL, Surgeon-in-Chief, Rhode Island Hospital, was a guest speaker at Rutgers University where he delivered one of the Walter C. Russell Memorial Lectures co-sponsored by the Department of Nutrition, Rutgers University, and The Academy of Medicine of New Jersey. The subject of Doctor Randall's talk was "Elemental Diets and Nutrition of Patients With Dysfunction of the Gastrointestinal Tract".

* * *

F. A. SIMEONE, Surgeon-in-Chief, was recently accepted into the Orthopaedic Research Society.

* * *

YANI KARKALAS, Assistant Chief of Psychiatric Services of the Rhode Island Institute of Mental Health and HARBANS LAAL, Ph.D., Professor of Pharmacology and Toxicology at the University of Rhode Island, have discovered that the compound haloperidol, when given in small doses can relieve even severe narcotic withdrawal symptoms within 12 to 48 hours.

* * *

STANLEY M. ARONSON, Pathologist-in-Chief and Director of Laboratory Medicine at The Miriam, and Professor of Medical Science at Brown University, has accepted an invitation to serve on the Perinatal Research Committee of the National Institute of Neurological Diseases and Stroke.

* * *

HISASHI TAMURA, was recently appointed a Clinical Instructor at Brown University.

* * *

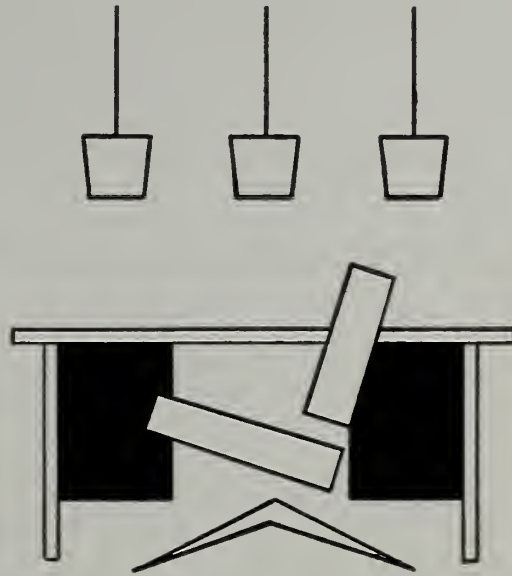
New officers of the Rhode Island Thoracic Society were elected at its annual meeting in May. They are BEN C. CLAUNCH, President-Elect; RICHARD W. PERRY, Vice-President; DAVID N. NEWHALL, Secretary-Treasurer; and HERBERT P. CONSTANTINE and ORLANDO ARMADA, members of the Executive Committee.



Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

WARWICK

FOR LEASE— 4 PROFESSIONAL OFFICES

Best Location in the City

Across From Kent County Hospital

On Toll Gate Road — \$350.00 Monthly

Air-Conditioning and Heat Included

Parking for 80 Cars or More

For More Information Call 737-9474

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

**Now
available for your
prescribing
needs**



Cordran[®] Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

Patients And Doctors

A Training Program For The Preparation Of Tomorrow's Generalist Is Proposed

By Eugene A. Stead, Jr., M.D.

Patients want to be able to pick up the phone at any time of day or night and have contact with a doctor who can take care of their needs. They want to call the same telephone number to obtain care for the child, the pregnant wife, or their aging parents. They want the doctor to be located at a geographically convenient place, with adequate parking. They want to know what the services will cost and they want a way to incorporate the expenses into their yearly budget. They want insurance or the government to cover the major portion of the expense.

Patients are not too concerned with the way doctors organize their practice to cover these few things that they believe are essential. They will accept solo practice or group practice in various forms. They do not have strong feelings about the use of paramedical personnel, nurse practitioners, physician's associates, or automated histories. They trust the doctor to keep his shop in order, to arrange his affairs so that they obtain competent, efficiently-delivered services.

EUGENE A. STEAD, JR., M. D., *Professor of Medicine, Duke University; Director, Regenstrief Foundation for Research in Health Care*

Presented at the 160th Annual Scientific Assembly of the Rhode Island Medical Society, Providence, R. I., April 24, 1971.

PATIENTS INDIFFERENT TO HEALTH MAINTENANCE

Patients have a very limited interest in health maintenance. Everyone knows that between the ages of one and 40 years most deaths are caused by automobile accidents. The number of deaths could be greatly reduced by abstinence from alcohol, by a governor on the car's engine that would not permit the speed of the car to exceed 40 miles per hour, and by the use of seat belts. There is no evidence that the general public is really interested in reducing the rate of accidents.

We can implement programs of preventive medicine for infants and children more easily than for adults. The pediatric programs center around prevention of infectious disease and prevention of accidents in the home. Preventive medicine in the adult population is a very different problem. The preventive measures that we know are effective in improving health (adequate housing, good transportation, adequate nutrition, pure air and water, protection of workers from noxious material while at work, education, and a reasonable yearly income) are much easier to list than to implement. We don't know how to prevent hypertension, atherosclerosis, cancer, emphysema, obesity, arthritis, gout, diabetes, myocarditis, gallstones renal

(Continued on Next Page)

stones, or most of the other chronic illnesses which hamper and maim our adult population. Preventive medicine to date has little to offer that will be accepted and used by the person who feels well. Curative medicine has much more to offer the patient who feels ill.

Professionals in the health field are the chief proponents for spending money on health maintenance programs. The public and a large portion of the practicing profession have many reservations. Health maintenance is an attractive idea to many people in public health schools and to many proponents of a national health insurance program which would be financed by the federal government.

PUBLIC'S EXPECTATIONS

What kind of doctors should be produced by the medical schools to meet the expectations of the public? What distribution should there be between the generalist who gives a large number of units of service at a low cost per unit and the specialist who gives a smaller volume of services at a higher unit cost? Will generalists continue to be in great demand or will people desire ready access to services of the specialist, even if this means atrophy of the generalists? Will the doctors in the future be willing to work as hard as the generalist of the past and present? How can around-the-clock services be given adequately in the face of a steadily decreasing work week?

We must be honest and admit that no one can be certain of the correct answers to these difficult questions. We must appreciate the complexity of these problems and not try to find single, simplistic answers to them. We must try multiple solutions for the present and leave to the future the selection of the best possible answer.

Medical knowledge is growing exponentially, and the human brain is undergoing little change in its capacity. Specialization is the only answer to this rapidly increasing data base, and we have just begun to enter the era of medical specialization. We can expect in the future more, not fewer, specialists. Think of the number of specialists that will be needed as the surgical treatment of coronary arterial disease improves. Cardiologists, cardiac roentgenologists, anesthesiologists, perfusion experts, and surgeons will be needed in unprecedented numbers. Think of the number of specialists involved in detecting unfavorable homozygotes by culturing amniotic fluid. Consider the specialized manpower that will be needed for the medical use of radioactivity. The field of nuclear medicine

today is where the field of radiology was 50 years ago. It is clear that we will continue to need more and more specialists and that, for the foreseeable future, specialists will be needed in far greater numbers than generalists.

FUTURE OF THE GENERALIST

With an ever increasing number of specialists, can the generalist survive? The virtue of the generalist lies in (1) geographical accessibility, (2) ability to handle simple problems with a minimal expenditure of the doctor's time, the patient's time, and the patient's money, (3) ability to determine a great deal about the patient and his family by accumulating small bits of information over a series of visits, (4) willingness to give primary care to all members of the family, and (5) referral of patients who require a large amount of time from the doctor. Many people believe that the generalist will not survive because patients will increasingly require that all their health problems be handled by the person most expert in that particular aspect of medicine. These same persons do not support the development of the nurse practitioner or the physician's assistant and associate because they believe that patients will eventually reject their services and require that everything be done by the doctor. I believe that they are wrong, and that patients will accept services from less skilled persons, provided that there is an effective and graceful way for them to move on to the next echelon if they are not satisfied with the way the system is working.

IS GROUP PRACTICE THE ANSWER?

Many persons have suggested that group practice — composed of internists, pediatricians, and obstetricians and gynecologists — will supplant the generalists. They believe that in 20 years generalists who are less specialized than the internist, the pediatrician, and obstetrician will be obsolete and unemployable. I disagree with them, not because the groups of specialists could not give good medical services but because they would always give relatively expensive services. These specialists are trained for low volume, high unit cost work. The more time for the doctor to think, the more the cost. There is another disadvantage in the use of specialty groups for primary medical care. A specialist sees only one member of the family. He is committed to giving this person the best medical care. He may commit all the resources of the family to a course of action which expends all their resources in a hopeless cause. The patient may live a few months longer, but

none of the children will receive an education.

If one wishes to assure the disappearance of the generalist, nothing needs to be done. Students selected predominantly by their ability to make good grades in college and required to pass our present basic science courses will continue to specialize. If we want generalists, we will have to have different admission committees, different faculties, different students, and different postgraduate experience.

Forty years ago most doctors in practice were interchangeable. They had had similar experiences in medical school and very little formal postgraduate experience. Now, doctors are interchangeable only during their medical school experience and, in many schools, for only the first two-thirds of their medical school experience. They then become internists, hematologists, allergists, nephrologists, renologists, endocrinologists, gastroenterologists, geneticists, respiratologists, surgeons, neurosurgeons, cardiac surgeons, orthopedists, urologists, ophthalmologists, anesthesiologists, otorhinolaryngologists, neonatologists, obstetricians, gynecologists, sterility experts, psychiatrists, roentgenologists (and a lot of subspecialists), radioisotopers, pediatricians (and again a lot of subspecialists), and generalists. We accept differentiation after medical school but resist it in medical school.

The obvious way to increase the number of generalists is to set up a division in the medical school to admit students who want to be generalists and to devise a separate track through medical school for the generalist. Give him a different postgraduate experience and make it difficult but not impossible for him to gain certification as a specialist. This program accepts the fact that the generalist has different aims and ambitions from the specialist and therefore is a different product from the doctors who are going on to specialization. It admits that "a doctor is a doctor is a doctor is a doctor" is no longer true. Most generalists now in practice wish to maintain the fiction that all doctors are interchangeable. They want the schools to produce generalists but they object to taking the steps which will make this possible — namely, the selection, education, and licensing of doctors for general practice.

Dr. David Rutstein, one of the distinguished Chapin orators, made the suggestion many years ago that there be a track through medical school for students more concerned with service and less committed to science. Experience with the phy-

sician's associate program has shown us how many persons now excluded from medical school would really like to become generalists if they could be accepted from small colleges and not be required to jump the basic science hurdles needed by the biomedical scientists but not needed by the generalist. It would be a relatively inexpensive track to devise. It would use many community facilities and would not be research oriented, and therefore not require new construction.

PROPOSED PROGRAM FOR GENERALISTS

The following paragraphs describe a proposed training program for the preparation of tomorrow's generalist. The program assumes that there must be a different recruit, a different training program, and a different postgraduate educational experience. It is assumed that this program will run in parallel with the conventional curriculum of a well-established medical school and be the responsibility of the Department of Community Health Sciences.

Selection of Students

Students will be chosen by a separate admissions committee who agree with the objectives of the program. Selection criteria will emphasize synthetic rather than analytic capability, interest in primary practice as a career, experience in health care and experience with geographic areas or groups which are in particular need of health care (e.g. rural areas, areas with a high percentage of minority residents). The students will be accepted from colleges which at the present have few or no students who are admitted to medical schools.

Preliminary Requirements

Prior to entry into the first year, the student will be asked to spend several months working in the office of a generalist. His role will be similar to that of a Type C physician's assistant. The purpose is to acquaint him with the type of patient seen in primary care practice and the general

(Continued on Next Page)

AN ADMINISTRATION VIEW

Government — any government — is more limited than we care to admit in solving some of our problems. Some impediments to life, liberty, and happiness, in other words, are not to be found in the province of governmental powers. To believe that they are is not only to divert attention from real causes, but to waste such powers on phantoms.

. . . Elliot Richardson, Secretary of HEW

characteristics of the services offered, so that he will be able to contrast this with care offered in the hospital setting. For those who may have had prior health care experience, this period of time might be spent in refresher courses at the undergraduate college level.

General Characteristics of Year One

The purpose of year one is to introduce the student to the words commonly used by the physician and to teach him how a physician thinks and works. It will be spent in the medical school and its hospital. The first four months of the year are largely didactic and taught by clinicians. The student learns topographical anatomy and x-ray anatomy before he learns to dissect. He will meet the liver in the clinic and appreciate its function in health and disease before he meets the liver in the morbid anatomical laboratory. He will learn interviewing techniques and methods of physical and laboratory testing before he concerns himself with the sciences which have produced these methods of examination. He will learn facts about growth and development by observations of families. He will have enough epidemiology to have a grasp of the kinds of illness which are important in the patient population of the state. At the end of four months he will begin his clinical clerkship. The practice of medicine is interspersed with classroom work, laboratory work, and demonstrations given by select members of the basic science faculty, chosen for their ability to relate their knowledge to the problems of the patient. The clinical instructor attends the basic science exercises and relates the material presented in lectures and laboratory exercises to the problems presented by the patient.

Year Two

Year Two will be a continuation of the clinical clerkship in that the student will be assigned to hospital wards and work under clinical preceptors. The experience will differ from the clinical year of most medical schools in that patients will be assigned without regard to the nature of the admitting diagnosis. In fact, an attempt will be made to mix medical, pediatric, surgical, and other types of patients in order to simulate the mix of patients likely to be seen in the generalist's office. The objective of the year is to teach the student to achieve facility in the approach to the seriously ill patient and to learn the responsibility for care of the seriously ill. Teaching rounds will be held on a daily basis, with the student and preceptor working together to derive maximum information from

the attending specialist appropriate to the major problem. The base for this exercise will be in a community hospital rather than the university hospital.

Year Three

Year 3 is designed to provide some exposure to management, records, the medical system, medical planning, and other components necessary for general practice. This material will be interspersed with patient experience in various office settings, with a large percentage of this experience being in general practitioner clinics. The objective of the clinical experience is to provide practical knowledge of the handling of relatively minor problems, achieving rapid turnover at a reasonable cost.

This will be interdigitated with experience in relevant basic sciences such as microbiology, clinical pharmacology, or pathology, and with experience in outpatient clinical settings of relevant subspecialties such as gynecology, ear-nose-throat, and dermatology.

Year Four

Year 4 of the program will be spent as a responsible clerk in a family practice program in a community hospital. The activity and responsibility will be those usually associated with an internship year. The fact that the trainee has not received the M.D. degree can be met in one of several ways. The most interesting way is that the student could be certified as a physician's associate and assigned to the chief of the service in the designated hospital. Thus he would receive some benefit of legal protection under legislation now under consideration in a number of states. It is hoped that these general practice programs will afford both inpatient experience and outpatient experience in a general care type clinic. This clinic experience will be designed to resemble a practice setting. It should have its own record system, its own personnel, and its own billing system. The student might also profit by receiving a small percentage of the income produced in the clinic.

Postgraduate Experience

The first year of post-M.D. experience will be spent in the office of specially selected family practitioners, functioning as a member of their clinic for periods of several months at a time. One rotation during this year will be in a university setting, such as the university health service, in which period the trainee will receive exposure to survey techniques, computer-patient interaction.

(Concluded on Page 388)

Utilization Of In Vitro Somatic Cell Cultures For Genetic Analysis

Isozymic Variants Are Used As Genetic Markers For Elucidating The Genetic Control, Expression, Linkage, And Chromosome Mapping Of Specific Enzyme Loci In Normal And Diseased Populations Of Human And Mouse In Vitro Somatic Cell Cultures

By Robert John DeLorenzo

INTRODUCTION

The utilization of *in vitro* somatic cell culture for genetic analysis has recently become a feasible and worthwhile objective (Harris¹⁰, Gartler and Pious⁸ and Pontecorvo²¹). Such an *in vitro* system would be an extremely powerful technique for studying the genetic constitution of man, where currently the freedom of genetic testing is dependent upon long generation times and mainly restricted to family and population studies (Stern²⁹, and McKusick¹⁸). The employment of somatic cell cultures could greatly contribute to the field of human genetics by extending the sensitivity of our observation from gross phenotypic variations to variations in enzyme, chromosome, and even gene structure. The initial success of *in vitro* somatic genetics depends upon the availability of two major factors: 1) the existence of experimentally controllable parasexual events *in vitro* amongst somatic cells; and 2) a large group of gene mu-

tants which would serve as genetic markers.

Cell hybridization, chromosome reduction, and somatic crossing over are the most studied parasexual processes. Since the evidence for somatic recombination in mammalian cells is not yet formalized (Shaw and Cohen²⁵), only somatic hybridization and chromosome reduction will be discussed in relation to somatic genetics. The development of viable, self replicating hybrid cell populations has become a well developed and sophisticated procedure (Howe and Morgan¹¹); Schneeborg and Harris²⁴) which is too expansive to discuss at length in this paper; however, it is important to realize that cell hybridization has now become a reliable and reproducible technique for utilization in somatic cell genetics. New procedures for promoting membrane fusion between cells and hybrid selection have led to the development of many hybrid cell lines, including human x animal hybrids.

Following hybridization it has been observed that chromosomes of the parent cell types may be lost or reduced in the hybrid (Silagi²⁷). The occurrence and pattern of chromosome loss is dependent on the methods of hybridization and mainly on

ROBERT JOHN DeLORENZO, Trenton, New Jersey; student in the M.D.-Ph.D. graduate program at Yale University.

Essay submitted to the Trustees of the Fiske Fund on the topic "Human Cell Cultures in the Diagnosis of Disease."

(Continued on Next Page)

the specific cell types employed. In mouse x human hybrids the human chromosomes are reduced in a random and progressive manner (Weiss and Green³², and Weiss, *et al*,³¹) until only a few often identifiable human chromosomes remain in the hybrid (Matsuya, *et al*,¹⁷). The importance of hybridization and consequent chromosome reduction is that this system provides an *in vitro* method for studying a limited number of human chromosomes which can be replicated and manipulated for genetic analysis. Such a system would be very useful for determining the site of genetic abnormalities which manifest themselves as altered or absent enzymes which are ultimately expressed as a disease entity. To adapt this technique of somatic cell cultures to the study of such medical problems requires the development of specific enzyme markers to assist in the analysis of abnormal gene expression.

Thus the study of genetic markers has become extremely important in the field of somatic genetics due to the rapid advances in cell hybridization. Four classical categories of genetic markers exist which are adaptable to *in vitro* somatic genetic systems: 1) mutants conferring resistance to antimetabolic agents; 2) variant forms of surface antigens; 3) autotrophic mutants and 4) mutations altering the electrophoretic mobilities of specific enzymes without changing their catalytic properties, isozyme variants (Ruddle²²). Each type of mutant class has specific advantages and disadvantages for utilization in *in vitro* somatic genetics, but the isozyme variants possess a number of advantages which make them the most useful markers for studying human genetics and the origin of enzyme defects in specific genetic diseases in man: 1) isozyme variants occur at rather high frequency (Harris¹⁰); 2) the variant enzyme proteins can often be explained in terms of amino acid substitutions (Shows²⁶); 3) the gene products are therefore direct expressions of genetic modification; 4) isozyme variants are usually expressed codominantly; and 5) the number of usable markers is mainly limited by the availability of new assays and electrophoretic techniques. Genetic markers of this type make it possible to study the enzyme character of specific somatic cell cultures and thus make it feasible to detect altered patterns of production or absence of specific enzymes. If isozyme markers for the mouse x human hybrid cells are developed, a method for mapping each marker to the appropriate human chromosome can be developed. When both

the human and mouse form of a specific enzyme is present in a human x mouse hybrid, it can be concluded that the human form of the enzyme is being produced by one of the three or four human chromosomes in the hybrid. By further studies with many hybrid clones, it is possible by the process of elimination to map a specific human enzyme to the appropriate human chromosome. Miggiano¹⁹ discusses this technique and explains some of the difficulties in identifying each human chromosome.

The practical and theoretical value of these techniques in understanding human genetics and detecting human disease *in utero* are immense. The major constraint against the application of these techniques to the study of human disease is not in the development of more sophisticated cell culturing methodology, but in the development of new and dependable electrophoretic techniques coupled with histochemical methods for visualizing specific enzymes that can be studied in both normal and diseased conditions. At the present time very few isozyme markers have been made available for application to somatic cell cultures. (Table 1.)

The research summarized in this paper presents the development of four genetic markers which have been utilized in somatic cell cultures to de-

TABLE 1
Major Enzyme Markers in the Mouse,
Mus musculus

| Enzyme | Gene Symbol | Expressed in vitro |
|--|-------------|--------------------|
| Esterase — 1 | Es-1 | No |
| Esterase — 2 | Es-2 | No |
| Esterase — 3 | Es-3 | No |
| Esterase — 5 | Es-5 | No |
| Autosomal Glucose — 6-Phosphate Dehydrogenase | Gpd-1 | Yes |
| Isocitrate Dehydrogenase | Id-1 | Yes |
| NADP-Malate Dehydrogenase | Mdh-1 | Yes |
| NAD-Malate Dehydrogenase | Mdh-2 | Yes |
| Phosphoglucumutase — 1 | Pgm-1 | Yes |
| Phosphoglucumatase — 2 | Pgm-2 | Yes |
| Lactate Dehydrogenase | Ldr-1 | No |
| Amylase | Amy-1 | No |
| Phosphoglucose Isomerase* | Pgi-1 | Yes |
| Glutamate Oxaloacetate Transaminase (Mitochondrial)* | Got-2 | Yes |
| Hexokinase* | ..... | Yes |

*New enzyme markers presented in this study. These new markers represent 30 per cent of the available genetic markers that are expressed *in vitro* and thus can be utilized in the study of somatic cell cultures.

lineate their genetic control. The work on glucose-phosphate isomerase (GPI) and glutamate oxaloacetate transaminase (GOT) has been presented in detail in two recent publications, and thus only the main aspects of this research will be presented in this paper in application to somatic cell cultures. Ongoing studies with hexokinase and deoxyribonuclease will be discussed in more detail, but considerations of methodology will be limited because of restrictions on the length of this essay. Each one of these enzyme systems will be presented individually to demonstrate their application to somatic cell cultures and to elucidate our findings concerning their genetic control and linkage relationships.

GLUCOSEPHOSPHATE ISOMERASE

GENETIC CONTROL AND SOMATIC CELL CULTURE

EXPRESSION OF TWO ELECTROPHORETIC VARIANTS

OF GLUCOSEPHOSPHATE ISOMERASE

A specific histochemical staining procedure was

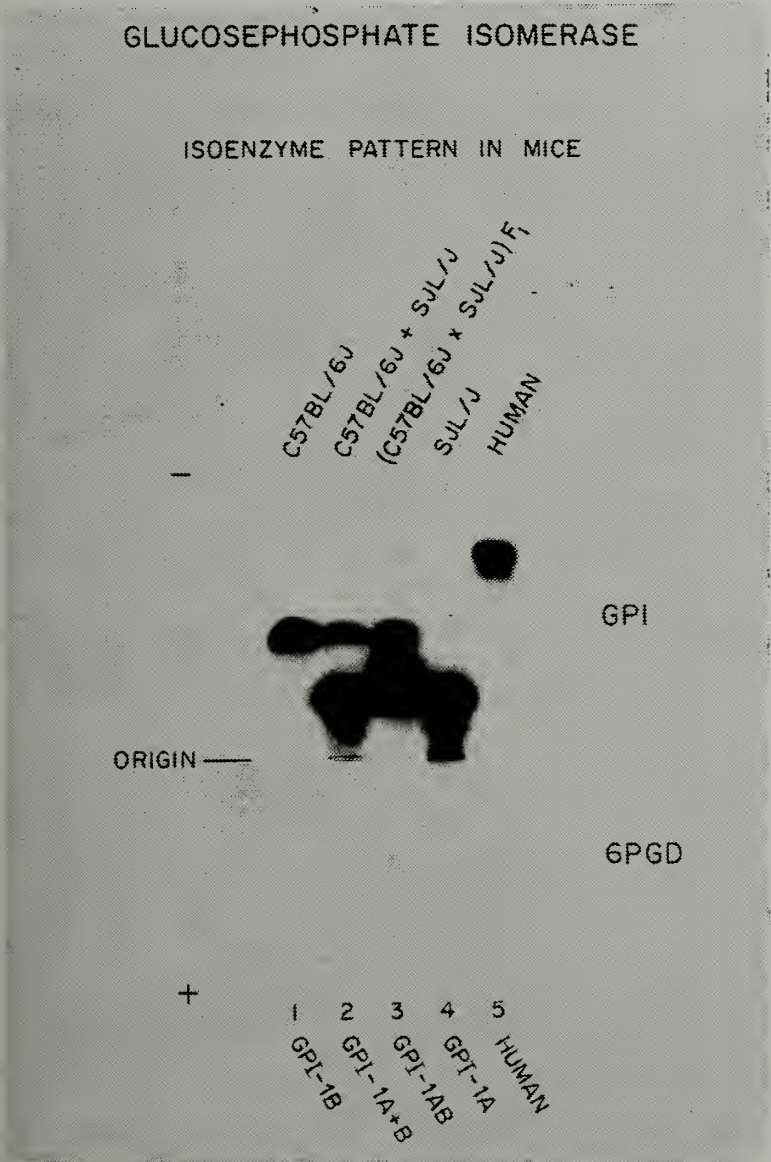


Figure 1
Zymogram of GPI representing the three distinct phenotypes of the mouse enzyme in channels 1, 3, and 4, and showing the result of a physical mixing of the A and B phenotypes in channel 2. The common GPI pattern from human erythrocytic lysates is included in channel 5 for comparison.

developed for glucosephosphate isomerase (GPI) which was applicable to starch gel electrophoresis. It was then possible to describe the autosomal variation and the genetic control of GPI (DeLorenzo and Ruddle³). Figure 1 represents the GPI zymogram illustrating the three distinct phenotypes of mouse GPI from kidney extracts. The GPI polymorphism described here occurs as a fast migrating form, B, and a slower migrating form, A. The heterozygous (F₁) AB pattern invariably contained three bands. Channel 5, Figure 1, presents the human form of GPI and demonstrates the difference in its mobility when compared with the mouse form of the enzyme. Thus the GPI marker will be very useful in mouse x human hybrids for mapping GPI to a specific human chromosome.

The locus controlling the production of GPI in the mouse has been designated *Gpi-1*. The two alleles at this locus have been described and designated *Gpi-1a* and *Gpi-1b*, which represent the slow and fast electrophoretic forms, respectively. The observed heterozygous phenotype (channel 3, Figure 1) of 1A:2AB:1B can be explained if the A and B subunits of GPI hybridize at random as dimers. It was also demonstrated that the polymorphism of *Gpi-1* is widely distributed in feral mice. Twenty-seven inbred strains of mice were classified for these two alleles and the absence of close linkage of *Gpi-1* to seven other genetic loci was determined. It was also found that GPI was expressed *in vitro* in four types of malignant tumors.

In conclusion we have demonstrated that GPI is expressed in fibroblast cells derived from fetuses of inbred mouse lines and in human cell lines which have been under continuous cultivation *in vitro* for over a year. The heterozygous combinations of the codominately expressed GIP variant alleles described by this work are now being employed in somatic genetic analysis *in vitro* and especially in somatic cell hybrids as a specific enzyme marker. Several *in vitro* tumor lines and human cell lines are also being observed for abnormalities in this crucial enzyme of the glycolytic pathway.

GLUTAMATE OXALOACETATE TRANSAMINASE (GOT)

LINKAGE, POLYMORPHISM, AND PHENOTYPES OF THE GOT-2 AND GOT-1 LOCI IN THE MOUSE AND IN IN VITRO SOMATIC CELL CULTURES

A comparison of electrophoretic patterns of F₁ and backcross progeny of two inbred strains of

(Continued on Next Page)

TABLE 2
Progeny Phenotypes

| Matings | GOT-2A | GOT-2AB | GOT-2B |
|--|--------|----------|---------|
| 1. C57BL/6J | .... | .... | 9 8 17 |
| 2. SWR/J | 6 6 12 | .... | .... |
| 3. (C57BL/6J X SWR/J)F ₁ | .... | 5 6 11 | .... |
| 4. F ₁ X C57BL/6J) BC ₁ | .... | 10 11 21 | 13 9 22 |

GOT-2 phenotypes in strains C57BL/6J, SWR/J, and crosses between them.

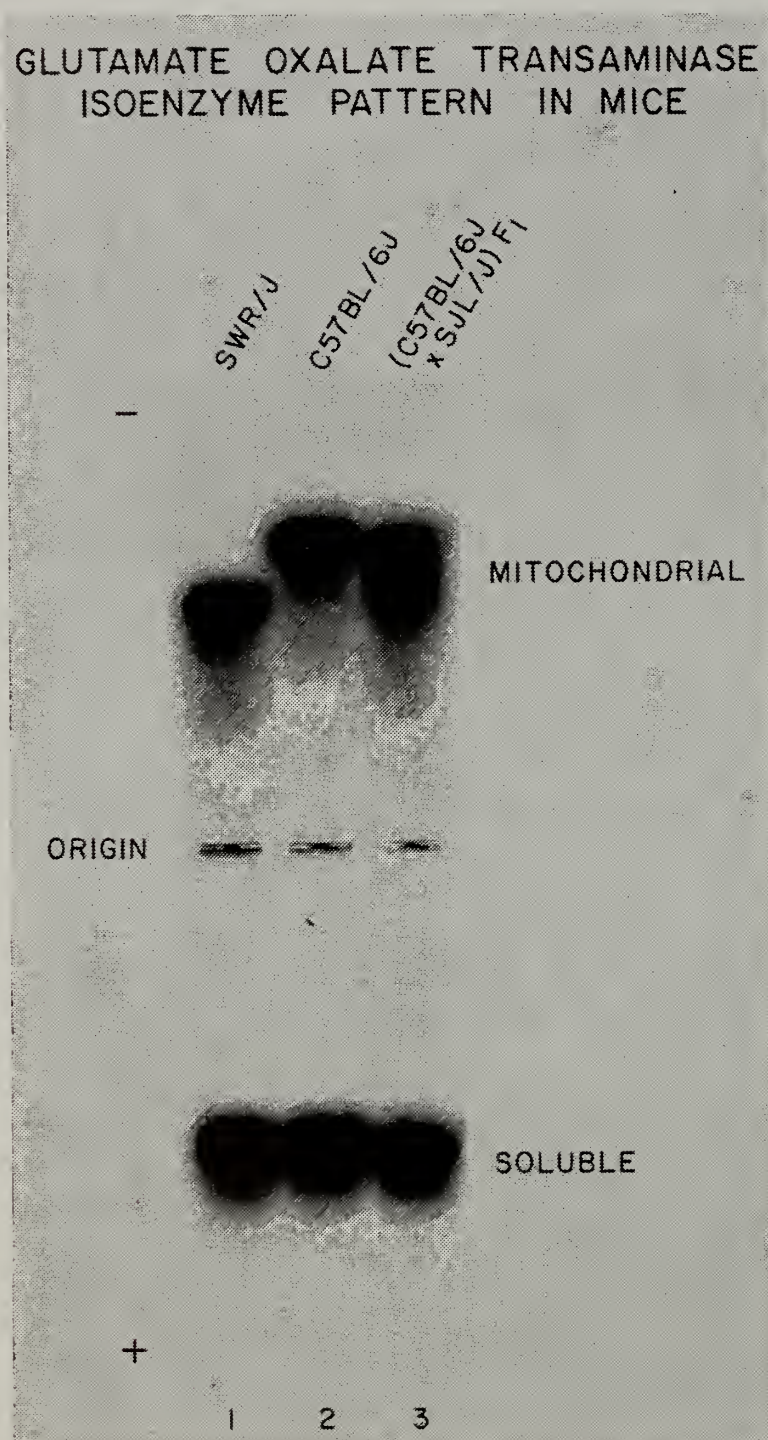


Figure 2

Zymogram of GOT representing the two isozymes of the enzyme and illustrating the three distinct phenotypes of the mitochondrial form of GOT. Subband patterns can also be distinguished accompanying both forms of GOT.

mice (Table 2) has revealed a new mitochondrial variant of GOT. This observation was made possible by the development of a more refined method for visualizing GOT electrophoretically by a modification of the technique of Babson, *et al.*¹ for determining GOT activity by employing a diazonium salt. Figure 2 presents the zymogram of GOT obtained by this method. It reveals the two distinct isozymes of GOT activity which were shown (Figure 3) to be a mitochondrial and soluble form of the enzyme. After surveying over twenty-seven inbred strains and forty wild mice no variation was observed in the anodal or soluble forms of the enzyme. The cathodal form of GOT, however, was observed to have three distinct phenotypes. Channels 1 and 2 in Figure 2 present the slow and fast forms of mitochondrial GOT respectively and channel 3 presents the three band heterozygous pattern of the appropriate F₁ matings. From studying F₁ and BC₁ crosses it was demonstrated that both the fast and slow bands of mitochondrial GOT were expressed codominantly in F₁ animals. The genetic control of the A and B subunits of these two alleles were shown to associate at random and the observed phenotype could best be explained if the subunits hybridized at random as dimers.

The two loci controlling the production of the soluble and mitochondrial GOT forms were designated Got-1 and Got-2, respectively. The two alleles of the Got-2 locus were designated GOT-2A and GOT-2B, which represent the slow and fast forms of the enzyme. Twenty-seven inbred strains of mice were classified for Got-2a and Got-2b and it was shown that the polymorphism of Got-2 was widely distributed in feral mice. Got-2 was demonstrated to be linked to Es-1, and its linkage to Es-2, Es-5, and oligosyndactyly (O:) was also presented. The absence of linkage of Got-2 to seven other loci was also demonstrated.

GOT was shown to be expressed *in vitro* cell lines derived from both human and mouse tissues (Figure 4). The human form of Got-2 was identifiable by its difference in electrophoretic mobility from the mouse form and thus should provide another powerful marker for hybridization studies. Current experiments to map this Got-2 locus in the human through hybridization studies are being conducted with a consideration of several other loci to explore the linkage relationship of GOT to the appropriate linked enzymes in the mouse. The importance of GOT is evident in its role in glutamate oxidation and nitrogen balance and be-

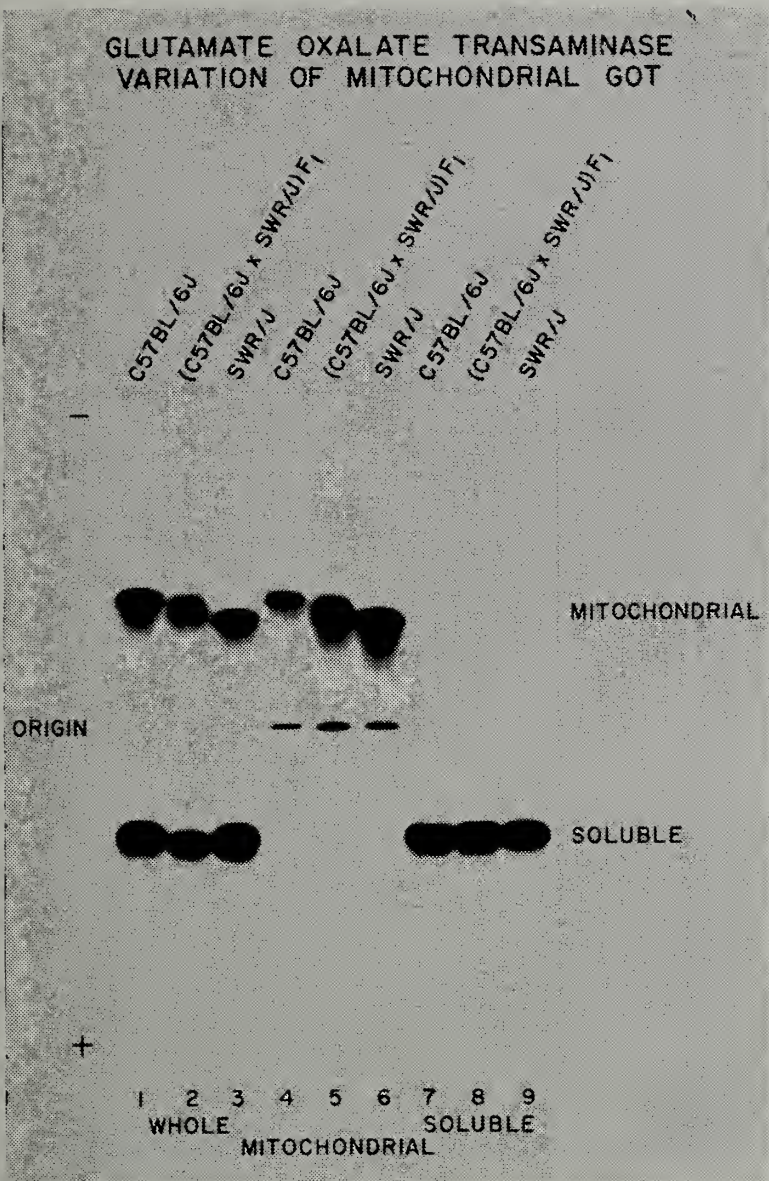


Figure 3

Zymogram of GOT phenotypes demonstrating the variation of the mitochondrial form of GOT and illustrating that the variation is only found in the mitochondrial isozyme.

cause of the elevation in serum levels of GOT during many disease states. It is also a crucial enzyme acting in the interconversion of proteins and carbohydrates (Figure 5). Studies are now being initiated to study the expression of this enzyme in numerous disease states and in the analysis of human cells obtained by transabdominal amniocentesis.

HEXOKINASE

ELECTROPHORETIC PATTERN AND EXPRESSION IN SOMATIC CELL CULTURES

The phosphorylation of hexoses by animal tissue has been investigated very intensively over the last thirty years, especially in conjunction with the mode of insulin action and the symptoms of diabetes mellitus (Krahl¹⁶, Katzen¹³, Katzen, *et al*¹⁵). Although this research concerning hexose phosphorylation has a lengthy history, it has only been over the last six years that studies have emerged which confirm that hexose phosphorylation is mediated by a multimolecular enzyme

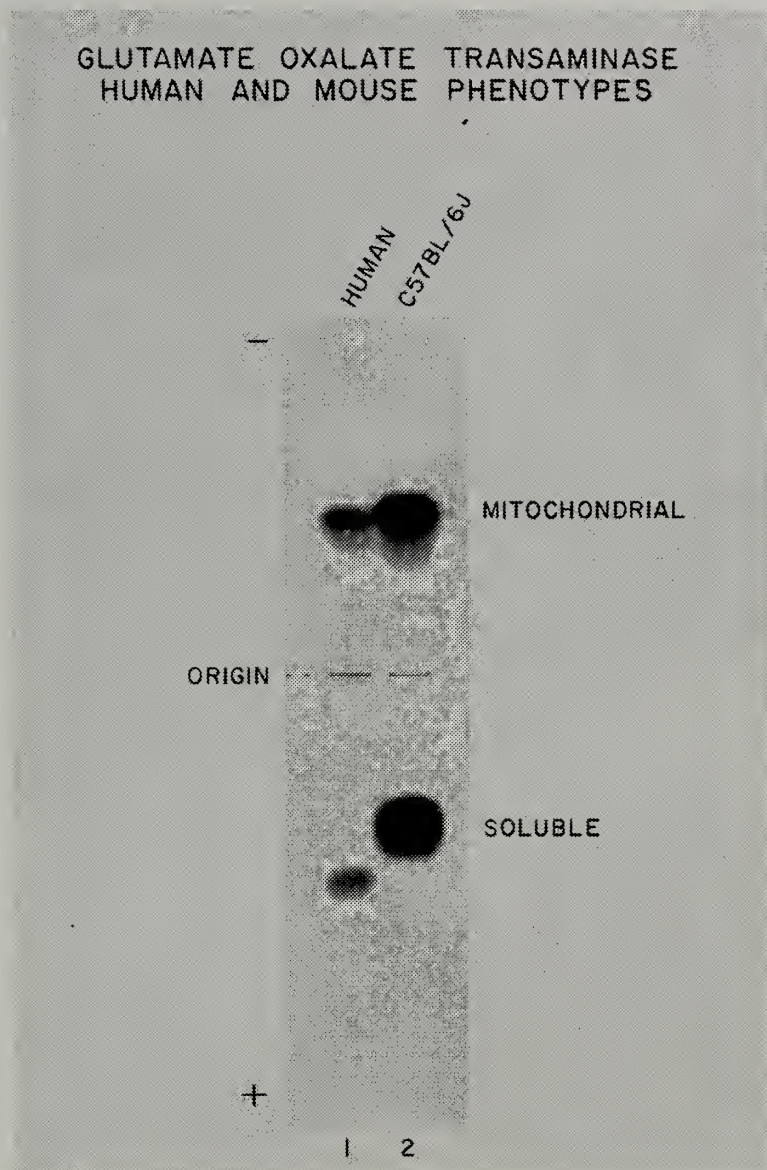


Figure 4

GOT phenotypes of IN VITRO human and mouse fibroblasts are shown. The mitochondrial forms have the same electrophoretic mobility, but the soluble forms of the enzymes have different mobilities.

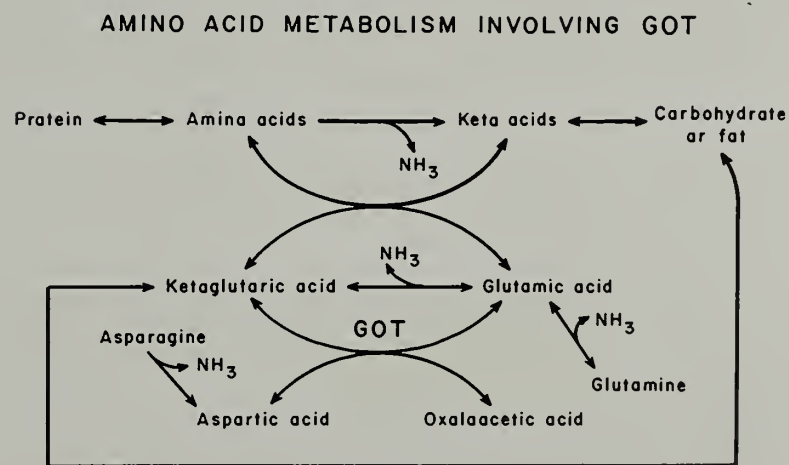


Figure 5

Amino acid metabolism involving GOT. Scheme adapted from Fruton and Simmonds, 2nd ed., 1958

system or a complex family of isozymes designated as the hexose: adenosine triphosphate (ATP) 6-phospho-transferases or more commonly, the hexokinases (Katzen, *et al*¹⁴, Grossbard, *et al*⁹, Katzen and Schimke¹⁴). The employment of spe-

(Continued on Next Page)

HEXOKINASE

TISSUE EXPRESSION

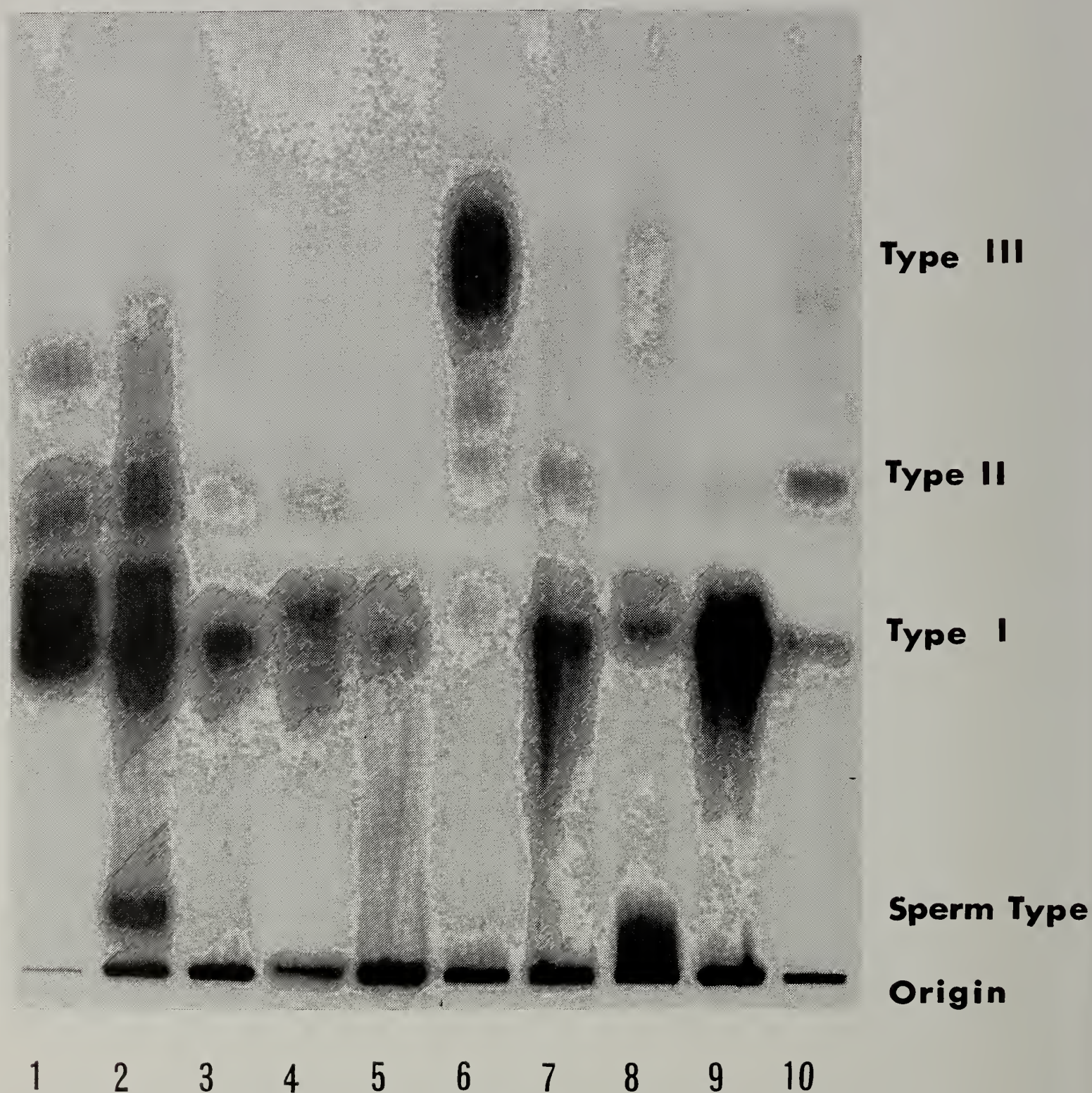


Figure 6

Zymogram of Hexokinase demonstrating the difference in tissue expression of the three types of the enzyme Channels 1-10 represent liver, testes, intestine,

lung, red blood cells, muscle, brain, heart, kidney, and spleen, respectively.

cific staining procedures coupled with starch gel electrophoresis was invaluable in elucidating the multiplicity of the hexokinases in the mouse and in demonstrating its characteristic tissue distribu-

tions and kinetic and physical properties (Schimke and Grossbard²³).

Currently the hexokinase system is being studied in this research effort to observe any possible genetic variation, to elucidate the genetic control

HEXOKINASE

IN VITRO EXPRESSION

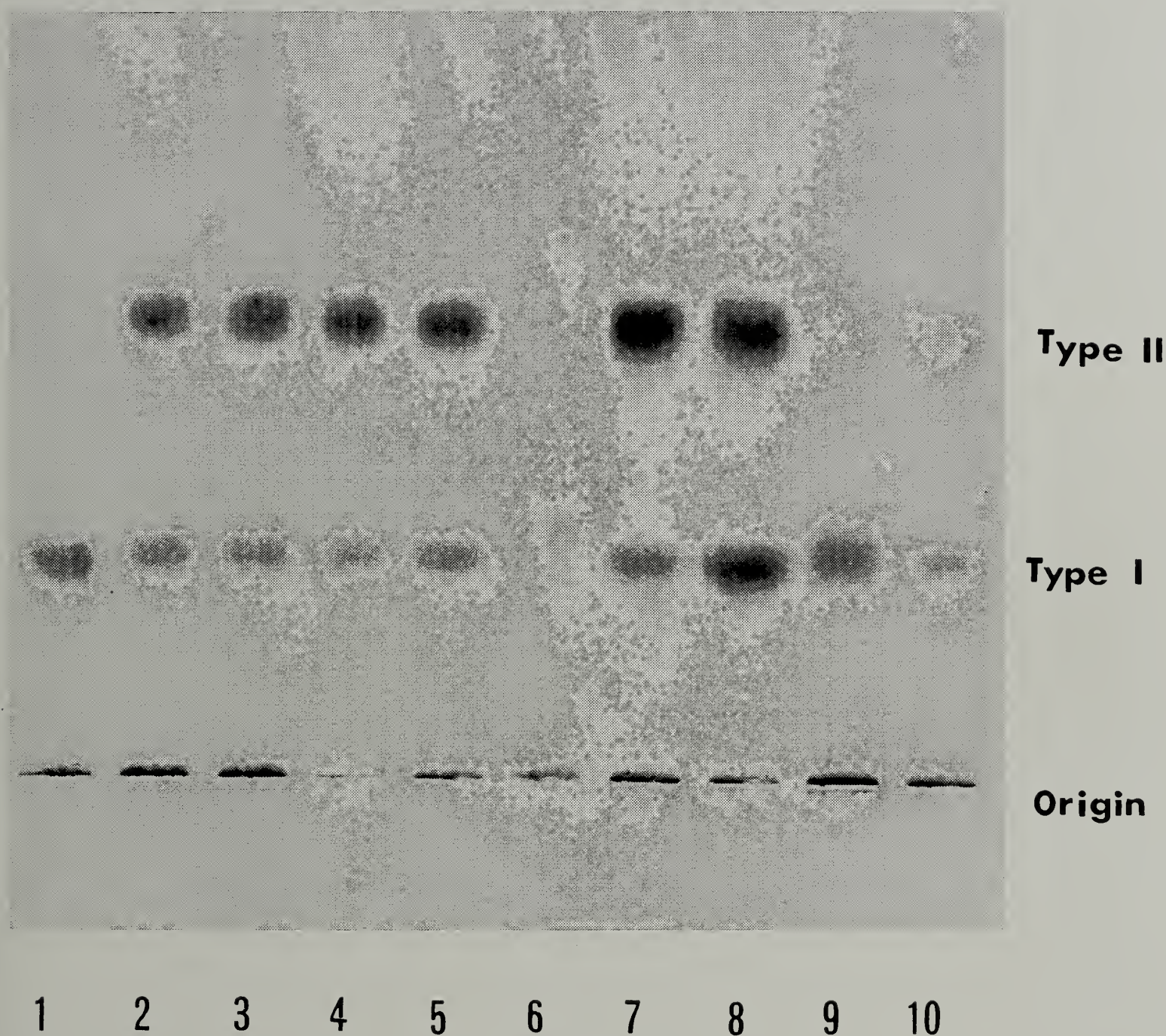


Figure 7

Hexokinase zymogram presenting the difference in mobility of both types of hexokinase between the mouse and human extracts derived from fibroblasts

maintained IN VITRO for over four months. Channel 1 shows the SJL/J pattern, and channels 2-5 and 7-10 present the patterns for mouse x human hybrids.

of hexokinase, and to employ hexokinase as a marker in *in vitro* somatic genetic analysis. The major source of hexokinase in this study was from kidney and liver extracts prepared by the method of DeLorenzo and Ruddle³. The vertical starch gel electrophoretic technique of Smithies²⁸ was employed using a Tris-EDTA-borate buffer system pH 8.6. The hexokinase was then visualized with

a tetrazolium — TPN coupled staining reaction which was developed to produce good resolution of the hexokinase bands.

The liver and kidney patterns of hexokinase are illustrated in Figure 6. In the mouse there are three forms of hexokinase which migrate toward the cathode: two low Km forms and one high Km

(Continued on Next Page)

HEXOKINASE

MOUSExMOUSE

HYBRIDS

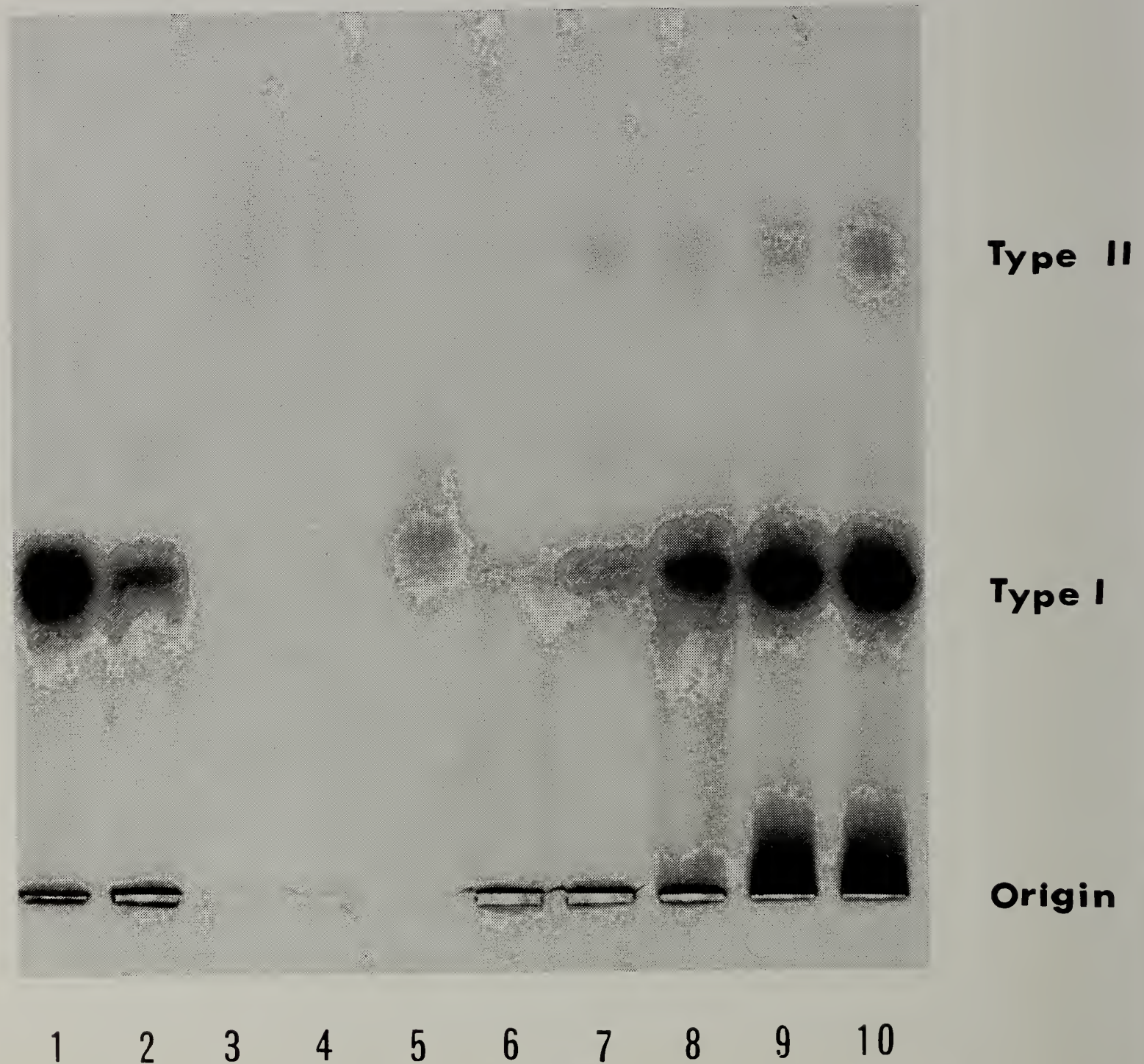


Figure 8

Hexokinase zymogram demonstrating gene regulation in mouse x mouse hybrids. Channels 9 and 10 present the parental LM(TK-) cells with both types of hexo-

kinase, and channel 6 presents the RAG parental cell line expressing only type I. Channels 7 and 8 present the mouse x mouse hybrid patterns of LM(TK-) x RAG.

form. Liver possessed all three forms, while kidney only possessed two forms of hexokinase. The different forms of hexokinase have been designated I, II, and III based on their electrophoretic mobility: form I is the slowest migrating band, form III is the fastest band, and form II is the inter-

mediate band. Since liver has a low concentration of form I, kidney extracts were used to survey for variants of form I, while liver extracts were utilized to survey for variants of forms II and III. The inbred strains A/HeJ, AKR/J, BALB/cJ,

(Continued on Page 378)

The Painful Shoulder Due To Rotator Cuff Tendinitis

Various Symptom Complexes Of Rotator Cuff Tendinitis Depend On Whether Lesion Is Local Or Diffuse

By Ian Macnab, F.R.C.S.

To avoid confusion I am going to define the rotator cuff as being made up of the tendinous insertion of the muscles that rotate the shoulder — the subscapularis, the infraspinatus, the supraspinatus, and to some extent the teres minor. These tendinous insertions blend intimately with each other and with the capsule of the shoulder forming a sort of epaulet. The cuff is separated from the acromion by the sub-deltoid bursa (Fig. 1). Although the tendinous insertions of the muscles seem to be avascular structures, microangiographic studies show a relatively profuse blood supply which, as the lateral sections show, runs throughout the tendon from the muscle belly to its point of insertion. Each of the tendons has a characteristic microvascular pattern, and the supraspinatus shows a constant area of hypovascularity near its point of insertion (Fig. 2). This area of decreased vascularity is probably related to the fact that

the supraspinatus has to pass over the hump of the head of the humerus to reach its insertion, and the prominence of the head of the humerus rings out the vessels in this area (Fig. 5).

It is in this zone of relative avascularity that degenerative changes are first seen, and indeed it is tempting to theorize that these changes are related to the impoverished vascularity in this area. In order to investigate this possibility further the histological changes associated with rotator cuff degeneration were studied. Normally the collagen fascicles demonstrate a regular wavy pattern, and this waviness accounts for the inherent elasticity of the tendon. One of the earliest breakdown changes seen (Fig. 3) is separation of the collagen fascicles, and at this stage the tenocytes fall into the interfascicular spaces and become plump. As the process continues, the individual strands of collagen become widely separated and acellular. Later they fragment.

EXPERIMENTAL FINDINGS

It is impossible to state that these histological changes are due to impaired vascularity. However, some experimental findings are of interest in this regard. If a portion of a tendon is excised and wrapped in Silastic® to prevent infiltration of cells from surrounding soft tissues and then re-

(Continued on Next Page)

IAN MACNAB, M.B., Ch. B., F.R.C.S. (Eng), F.R.C.S. (C), *Assistant Professor of Surgery, University of Toronto, Chief of Division of Orthopaedic Surgery, Wellesley Hospital, Toronto, Ontario*

Delivered at Rhode Island Hospital, November 19, 1970. This work was undertaken with the aid of a grant given by the Workmen's Compensation Board of Ontario.

Coronal Section

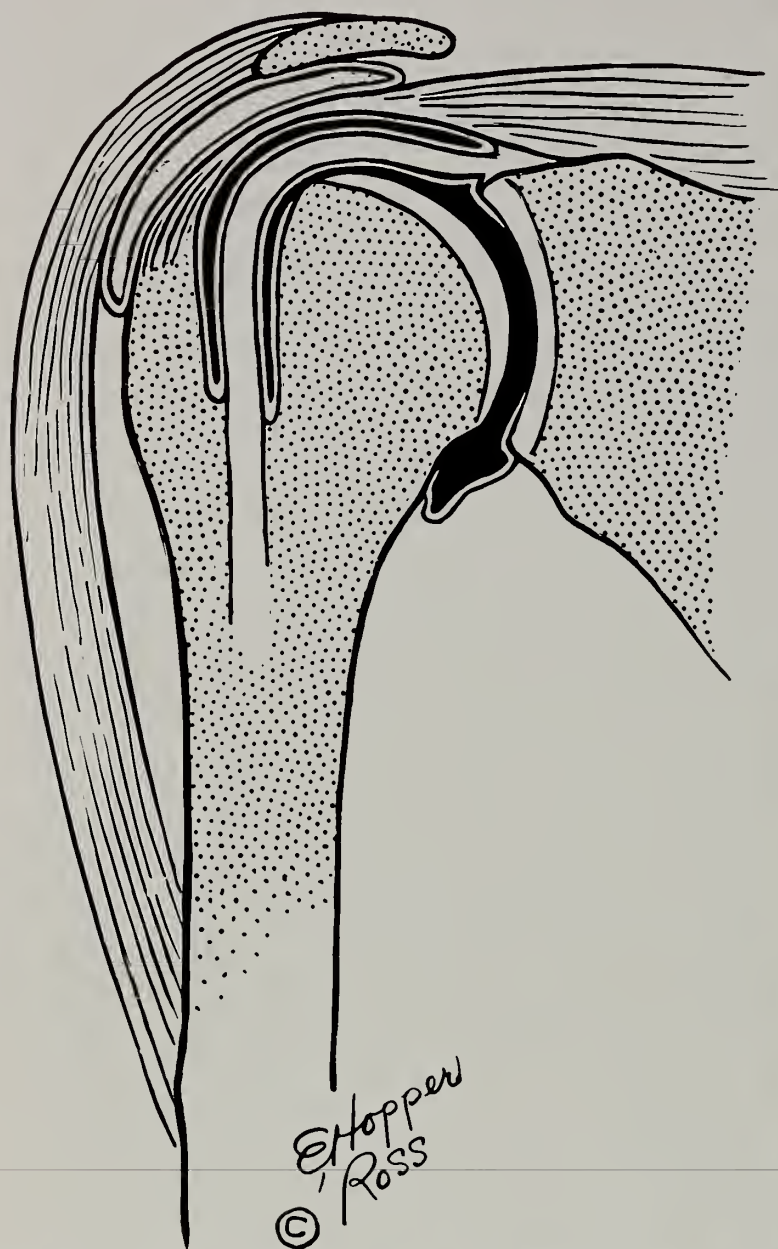


Fig. 1. Diagram to show the relation of the subacromial bursa to the rotator cuff and shoulder joint.

implanted, almost identical histological changes are observed.

These changes, however, result from sudden, total deprivation of the blood supply. The experiment was repeated, therefore, to study the effect of pressure on the tendon of the type exerted by the head of the humerus giving rise to partial, but long standing, interference with the vascularity, and to do this a mound of plastic was fixed in position under the tendo Achillis of a rabbit (Fig 4). The sequential histological changes were identical. By 30 days marked disorganization had occurred in the center of the tendon. It was interesting to note that the change occurred in the center of the tendon first. The same sequence was seen in the

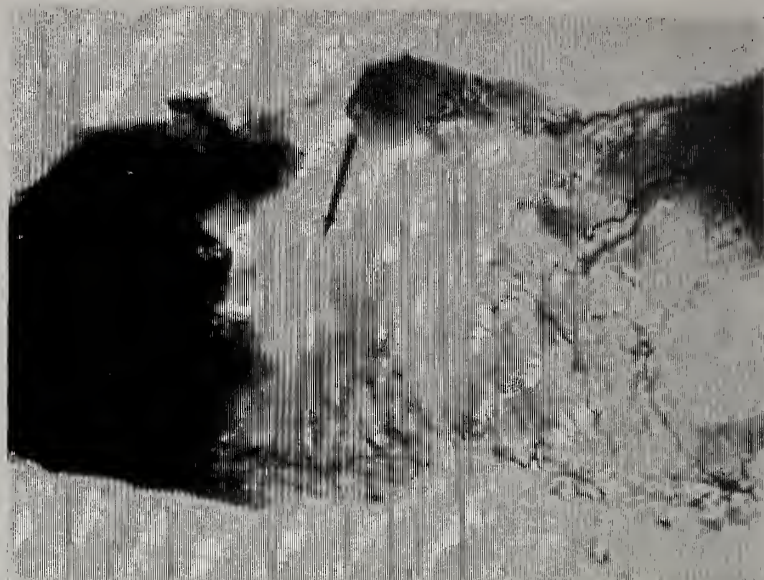


Fig. 2. Microangiograph of supraspinatus showing area of hypovascularity near point of insertion.

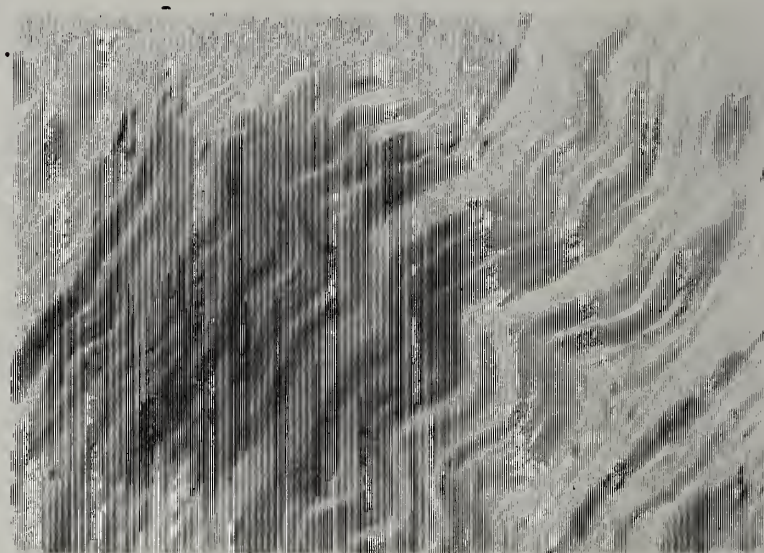


Fig. 3. Photomicrograph showing marked fasciculation of collagen bundles in degenerative area.



Fig. 4. Plastic mound inserted under the tendo-achilles of a rabbit to simulate the pressure exerted by the head of the humerus on the supraspinatus tendon.

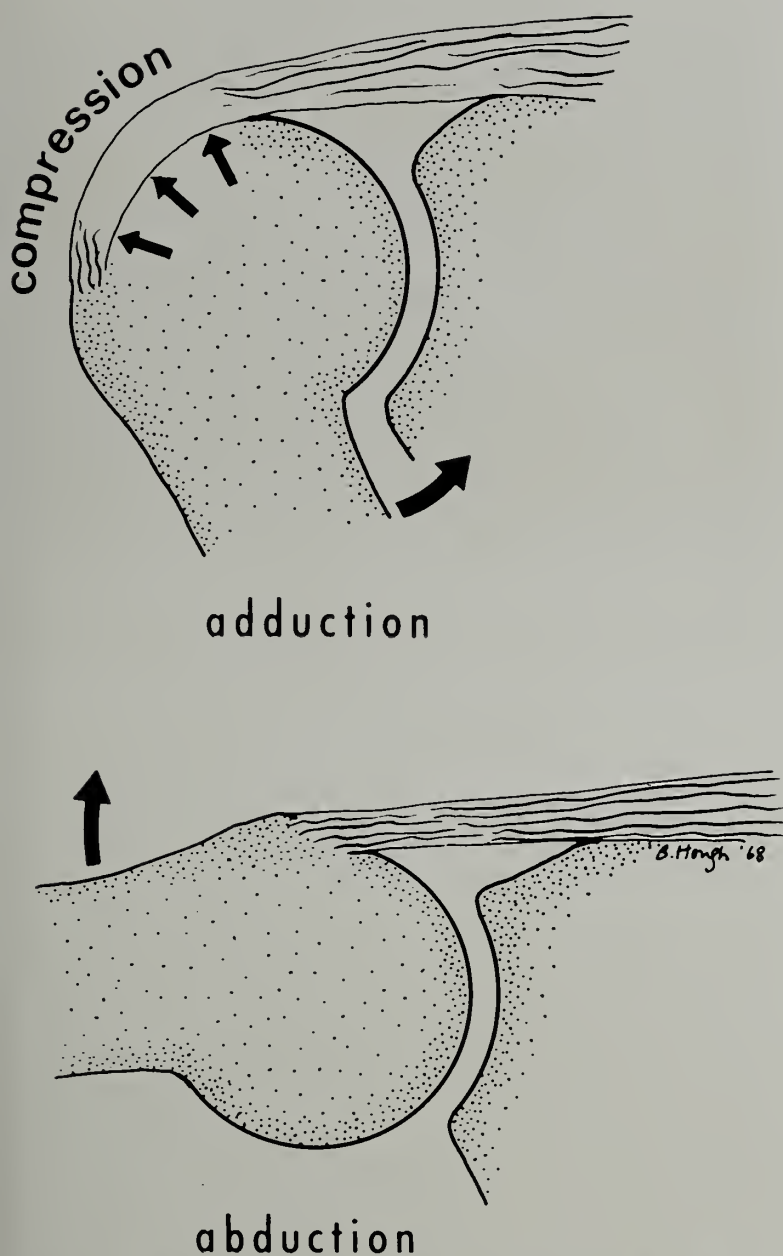


Fig. 5. Diagram to show the compression applied to the supraspinatus by the head of the humerus with the arm in abduction.

human tendons studied; the deep portions of the tendon showed breakdown changes first, and the superficial portions were the last to be involved. This is an important observation in view of the often quoted opinion that friction of the tendon against the free edge of the coraco-acromial ligament is the cause of the breakdown changes observed. If this were indeed the mechanism, then the early changes should be seen on the superficial aspect of the tendon. In the autopsy specimens examined, buckling of the tendon and pressure, against the coraco-acromial ligament was only seen with a partial tear on the deep surface of the tendon. In such instances buckling occurred at the site of the tear.

HYPOTHESIS

These experimental observations and a study of the histological changes associated with rotator cuff tendinitis in humans led to the following basic hypothesis. It is suggested that owing to the ana-

tomical disposition of the tendons around the head of the humerus (Fig. 5) there is an impoverished area of vascularity near the point of insertion of the supraspinatus tendon. Here the cells depend on the ability of tissue fluids to diffuse through the tendon for their survival. With increasing age, diffusion may become increasingly difficult, and portions of the tendon may die (Table I). This is the basic lesion — cell death — which may be local or diffuse.

This area of cell death may evoke an inflammatory foreign body response (Table II) which can be termed a tendinitis. This in turn produces a bursitis — or the dead portion of the tendon may calcify, or rupture.

Rupture of the supraspinatus tendon is common. In order to understand the pathomechanics of rupture of the supraspinatus tendon, muscle-tendon-bone preparations from the hind limb of a rabbit were subjected to loads applied at varying rates using an Instron[®] machine. A normal tendon never broke. Either a small flake of bone was broken

(Continued on Next Page)

ROTATOR CUFF TENDINITIS

BASIC LESION

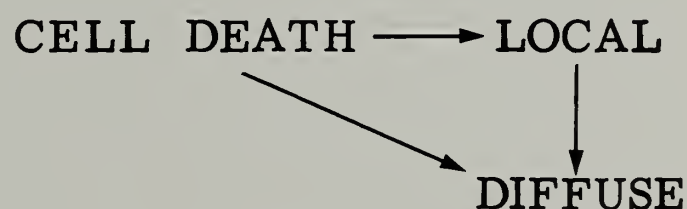


TABLE I

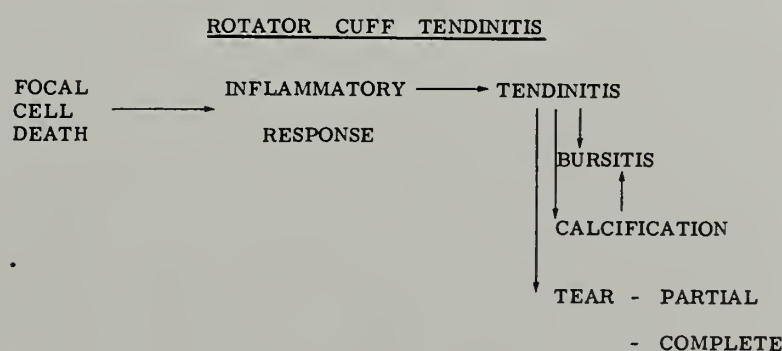


TABLE II

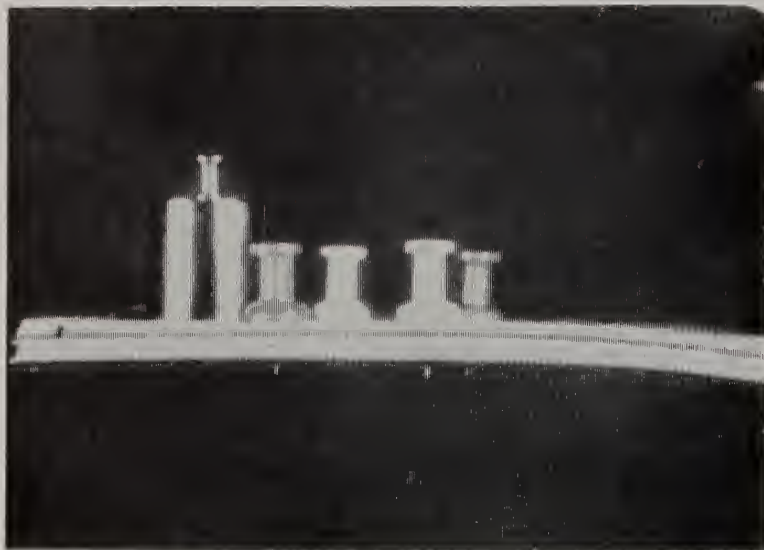


Fig. 6. When sheaves of paper are bonded together by pins transfixing them they can support a weight.

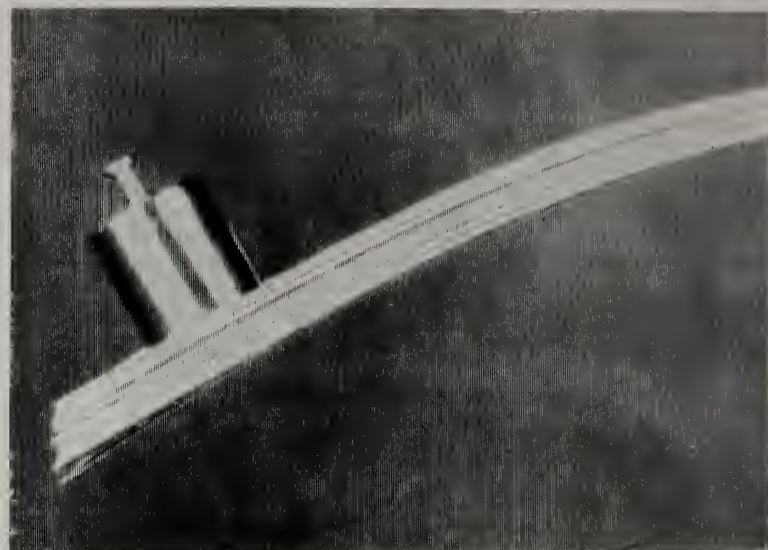


Fig. 7. When the pins are removed the sheaves of paper can glide on one another and they can no longer support the weight. This model demonstrates the weakening effect of fasciculation.

off at its point of insertion, or the muscle fibres were torn.

Although a normal tendon would break only at areas of stress concentration, such as the point of attachment to muscle or the point of clamping of the tendon, tendons with experimentally produced degenerative changes ruptured at the site of degeneration at very much lower loads. As mentioned before, one of the earliest histological changes associated with tendon degeneration is fasciculation with separation of the collagen bundles. The weakening effect of fasciculation can be easily demonstrated on a model (Figs. 6 and 7).

There are several factors, therefore, that predispose to rupture of a supraspinatus tendon. Firstly, it is a short tendon which will disrupt more readily than a long tendon of equal dimensions. Secondly, hypovascularity predisposes to degenerative changes, and the resulting fasciculation decreases the tensile strength of the tendon. Thirdly, the compression effect of the head of the humerus increases the degree of stress concentration at the point of insertion of the tendon. Finally, a partial tear — commonly seen in specimens examined — produces a notch effect which by itself will produce an area of stress concentration predisposing to complete rupture on strain.

FREQUENCY OF RUPTURE

The interrelation of these various anatomical, physiological, pathological, and mechanical factors accounts for the remarkable frequency of ruptures of the supraspinatus tendon when compared with other tendons in the body.

A chronic tear generally starts on the deep surface of the tendon, gradually extending through

the tendon until it reaches the surface. Partial ruptures not extending to the surface of the tendon were frequently encountered in the specimens examined. These could not be seen on inspection of the superficial surface of the tendon but were demonstrated by the buckling of the tendon that occurred on abduction of the arm.

A degenerate tendon, therefore, as a result of minor trauma may rupture and the resulting tear may be small or may be a complete avulsion of the rotator cuff from its attachment to bone.

Rotator cuff tendinitis, subacromial bursitis, calcific tendinitis, and rotator cuff tears are all varying manifestations of the underlying basic pathological lesion of focal cell death.

The changes described, however, may involve the whole capsule of the shoulder giving rise to a diffuse capsulitis. If the concept of the initial lesion in rotator cuff tendinitis is focal cell death, arising in an area of partial avascularity, it is difficult to understand why the lesion should spread to involve other tendons normally well vascularized.

TISSUE RESPONSES

In the rabbit hump experiments it was noted that at 30 days, even when there was marked disorganization in the center of the tendon, the outer fibres remained relatively normal. However, this relatively healthy tendon, surrounding the central area of necrosis, was infiltrated with round cells. It was impossible to determine whether this was a tissue response to the contained degenerate denatured tendon or whether this was an early histological change associated with impending tendon breakdown.

Painful Arc Syndrome

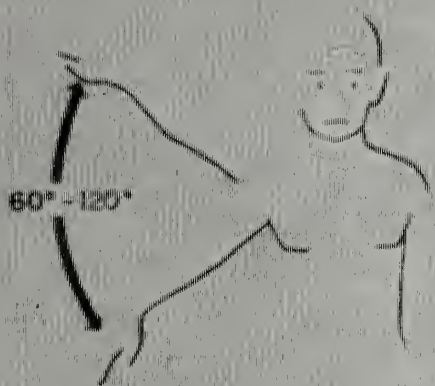


Fig. 8. Supraspinatus tendinitis with or without an associated tear or calcific deposit frequently presents with a painful arc of movement between 60° and 120° of abduction.

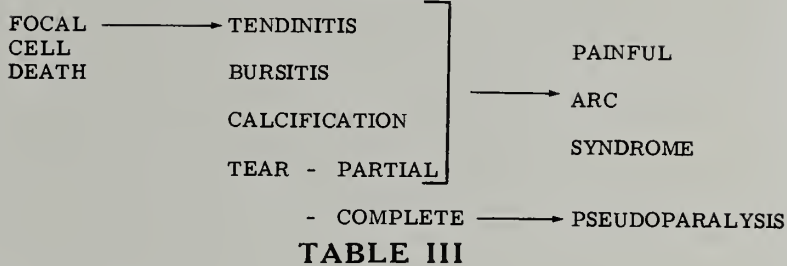
To study this further the response of a viable tendon to an avascular fragment of tendon was observed. A portion of a tendon was excised and was then buried inside a healthy tendon. The buried avascular fragment of tendon became mummified and the host became infiltrated with round cells. Morphologically these round cells appeared to belong to the lymphoid series and when stained with the Una Papenheim stain they showed the characteristic rose-red cytoplasm of pyronilophilic lymphoid cells. Although these cells are in no way specific, the presence of them in large clusters suggests the possibility of a cellular immune response mediated through the lymphatic system.

In this type of immune response the antigen is transported to the regional lymph nodes where it evokes an antibody response. These antibodies are transported in cells, the pyronilophilic cells, back to the site of antigen production, and there they give rise to a local antigen-antibody reaction. This was readily investigated because in the rabbit the lymphatics of the hind foot drain into a single node in the popliteal fossa.

Four days after implantation of a tendon fragment, the normal histology of the lymph node — loaded with basophilic lymphocytes — changed, and numerous pyronilophilic cells appeared. Two days later rose-red pyronilophilic lymphoid cells were seen in the host tendon around the implant. When implantation of a fragment of tendon is repeated after removal of the lymph node, the implanted tendon does not evoke any response in the host. It is well tolerated. There is no round cell infiltration.

In order to evoke an auto-immune response there must be vascular or lymphatic contact with ab-

ROTATOR CUFF TENDINITIS



normal protein, in this instance presumably either "altered collagen" or disintegration products of the protein polysaccharides. In this regard it is interesting to note that in human shoulders there is frequently a vascular reaction around the area of tendon degeneration. Surgical division of the subscapularis in the treatment of frozen shoulders gave the opportunity to examine portions of the rotator cuff in this lesion. Histological examination demonstrated infiltration of the tendon with pyronilophilic lymphoid cells, showing the distinctive and characteristic rose-red cytoplasm.

Obviously this is not the sole mechanism of the complex changes that occur in rotator cuff tendinitis, but it is suggested that changes of this type may play a part in the production of the histological changes that do occur and the clinical syndromes associated with them.

SYMPTOM COMPLEXES

Supraspinatus tendinitis with or without associated calcification, tear, or bursitis presents as pain in the shoulder, with a painful arc of movement (Fig. 8). On attempted abduction the patient can abduct the arm to 60 degrees, and then experiences severe pain from 60 to 120 degrees of abduction. From 120 degrees to full abduction the movement is relatively pain free. A similar painful arc of movement is seen when the arm is lowered to the side.

Although a small tear in the rotator cuff gives rise to this painful arc syndrome, a massive tear generally presents with inability to abduct the arm at all — a pseudoparalysis (Table III). When the patient attempts to abduct the arm he just shrugs his shoulder. Of course this inability to abduct may be due to severe pain. However, if the patient is still unable to abduct the arm after infiltrating the shoulder with local anaesthetic, then the possibility of a massive tear becomes highly suspect, and further confirmation can be obtained by arthrography. Arthrography alone cannot determine the size of a tear. However, if intra-articular pressure readings are taken, a fairly ac-

(Continued on Next Page)

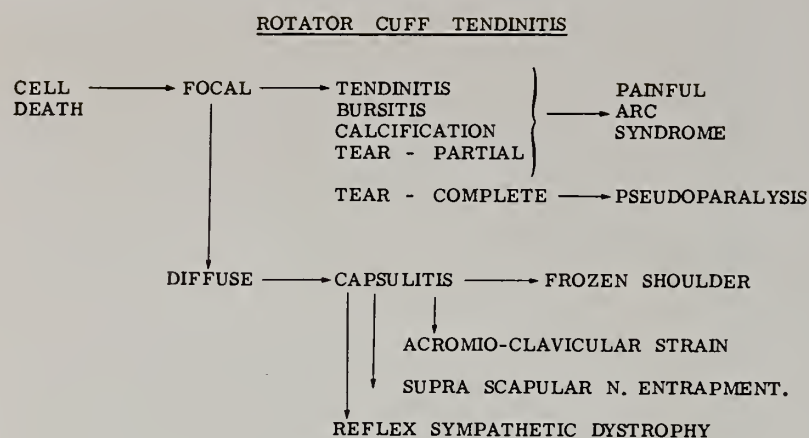


TABLE IV

curate assessment of the extent of the rupture can be obtained. If the rotator cuff is intact, the intra articular pressure increases proportionately as fluid is injected into the joint. If there is a small tear, the pressure rises initially and then reaches a plateau. If there is a massive avulsion, there is little, if any, increase in pressure.

When the biceps tendon is involved — especially in those patients where it is the major lesion — the pain is felt in the anterior aspect of the shoulder. There is tenderness here, and there is aggravation of pain by forward flexion of the arm against resistance holding the forearm supinated. For this reason I have designated the syndrome “Palm-up pain”. Degenerative changes in the biceps tendon may be present without pain of course, and they may go on to spontaneous rupture. If the shoulder was previously painful, the pain may go after the tendon breaks.

When the inflammatory reaction is more diffuse and involves the whole shoulder — a diffuse capsulitis — all movements of the shoulder are painfully limited initially during the inflammatory phase — the irritative phase — by muscle spasm and later limited by contractures of the capsule (Table IV). It is to this clinical syndrome that the term “Frozen Shoulder” is applied.

When a patient with a frozen shoulder tries to abduct the arm, he does so by rotating the scapula. This movement involves excessive movement at the acromio-clavicular joint. Excessive movement here over a period of time frequently produces a chronic acromio-clavicular strain, and the pain derived from this joint characteristically will radiate from the tip of the shoulder along the top of the trapezius and on many occasions will radiate up the side of the neck to the sterno-mastoid. This distribution of pain is almost pathognomonic of an acromio-clavicular lesion.

Similarly, forward flexion of the arm would involve dragging the scapula around the chest wall,

| Number of Patients | Dosage | Repeated Injection(s) |
|--------------------|--------|-----------------------|
| 45 | 25 mg | 20 (40%) |
| 135 | 125 mg | 27 (21%) |

TABLE V

and this may put a traction strain on the supra-scapular nerve. This will be more marked if the nerve is tethered as it passes through the supra-scapular notch. When this occurs, there may be gross wasting of the supraspinatus and infraspinatus muscles and marked tenderness on palpation. Restriction of movement at the gleno-humeral joint can bring in its train two further lesions — acromio-clavicular strain and suprascapular nerve traction.

Finally, a rotator cuff capsulitis may evoke a strange and ill understood response known as reflex sympathetic dystrophy, characterized by a swollen, painful hand with stiff fingers — the so-called shoulder-hand syndrome.

TREATMENT

The painful arc syndrome, with or without calcific deposit, usually responds to local infiltration of steroids into the sub-deltoid bursa. The pain experienced by the patient is frequently at the insertion of the deltoid. Tenderness may be maximum here. It is important not to be deceived by the site of tenderness around the shoulder joint. These areas of tenderness may be areas of referred tenderness and do not necessarily indicate that the lesion is immediately under the tender area. It is probably best, therefore, to confine the injection of local steroids to the sub-acromial bursa.

On occasions it is necessary to inject the shoulder more than once, but the need for repeated injections is decreased if 125 mg. of hydrocortisone is employed (Table V). The longer the history, the more likely the need for a second injection. Rarely, a dessicated, long standing, calcified plaque constitutes a mechanical irritation. It does not respond to local or systemic steroids and demands operative removal.

A complete avulsion ideally should be repaired. Although good results can be obtained on occasions, recovery is usually very slow and full functional recovery is exceptional. Although excellent results of tears of the rotator cuff have been reported in the literature, this is not in keeping with common experience, and it is to be noted that the operative

procedures were carried out by surgeons particularly interested in surgery of the shoulder. A review of 71 repairs of massive rotator cuff tears carried out by several surgeons throughout the Province of Ontario was very disappointing. Only 20 per cent of the patients could abduct above 140 degrees. Twenty-five per cent of the patients were unable to reach 90 degrees abduction. More than half of the patients studied (55 per cent) were unable to maintain abduction against 90 degrees two-finger resistance.

Surgical repair is difficult because of the nature and the state of the tissues involved. It is difficult and at times impossible to get adequate apposition of the two halves of the ruptured rotator cuff. Moreover in the specimens showing a complete rotator cuff tear, the tendon was attenuated, the avascular zone was more extensive, and there was correspondingly greater degree of tendon degeneration (Fig. 9). Repair of these lesions involves, therefore, suture of an attenuated degenerate tendon to bone under tension. Because of this, and because of the histological findings, a modification of the technique of repair initially advocated by DeBeyre¹ has been employed in repairing massive avulsions of the rotator cuff. This technique mobilizes the whole of the supraspinatus muscle and advances it in the supraspinous fossa of the scapula. This allows excision of the degenerate portion of the tendon and implantation of the healthy stump of the tendon into the greater tuberosity of the humerus.

In untreated complete avulsions of the rotator cuff eventually the head of the humerus migrates superiorly and comes to rest underneath the acromion. A false joint is formed here, and this acts

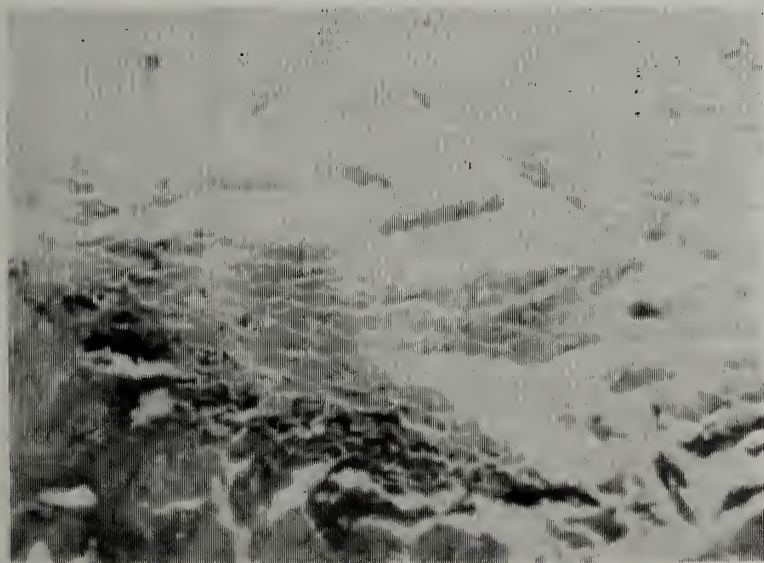


Fig. 9. Photomicrograph showing marked degenerative disorganization at site of tear in the tendon of supraspinatus.



Fig. 10. This patient has an irreparable tear of the supraspinatus. She had developed a false joint between the acromion and the head of the humerus. This was painful on movement. A metallic fulcrum cemented to the undersurface of the acromion restored painless mobility.

as a fulcrum of movement allowing the deltoid to initiate abduction without the aid of the supraspinatus. Long standing tears, therefore, may show a spontaneous recovery without any healing of the tendon. In some instances, particularly in patients with rheumatoid arthritis, movement of this joint is limited and painful. In such instances a metal spacer or false fulcrum can be placed between the head of the humerus and under surface of the acromion and fixed in position with acrylic cement (Fig. 10).

Bicipital tendinitis may be an isolated lesion, but much more commonly it is associated with a diffuse rotator cuff tendinitis. The response to local steroids, even if combined with steroids by mouth, is a little uncertain. Even if the inflammatory response settles down initially, it frequently flares up because of the mechanical irritation produced by a thickened tendon with an irregular surface trying to glide through the bicipital groove. In these instances operative intervention is occasionally indicated. If at operation the biceps tendon is found to be relatively healthy, and the reaction mostly in the sheath — a bicipital tendo-vaginitis — then division of the sheath is all that will be required. If, however, the tendon is found to be grossly degenerate, then the intra-articular portion of the tendon has to be excised, and the tendon sutured to bone at the bicipital groove.

With a diffuse capsulitis injection of steroids into the sub-acromial bursa or even into the shoulder joint itself is rarely of value. These patients respond more favorably and more rapidly to sys-

(Continued on Next Page)

ROTATOR CUFF TENDINITIS

| PATHOGENESIS | | PATHOLOGY | SYMPTOMS | TREATMENT |
|--------------|---------|---|-------------------------------|---|
| CELL DEATH | LOCAL | TENDINITIS BURSITIS CALCIFICATION PARTIAL TEAR | PAINFUL ARC SYNDROME | LOCAL STEROIDS |
| | | COMPLETE TEAR | PSEUDO - PARALYSIS. | OPERATIVE REPAIR |
| | DIFFUSE | BICIPITAL TENDINITIS | PALM-UP- PAIN | a. LOCAL STEROIDS b. TENOLYSIS |
| | | CAPSULITIS | FROZEN SHOULDER | a. PHYSIOTHERAPY b. SYSTEMIC STEROIDS c. MANIPULATION d. CAPSULOTOMY |
| | | A/C JOINT STRAIN | PAIN TO EAR | LOCAL STEROIDS A/C ARTHROPLASTY |
| | | SUPRASCAPULAR N. ENTRAPMENT | WASTED SPINATI | NEUROLYSIS |
| | | REFLEX SYMPATHETIC DYSTROPHY | SHOULDER- HAND SYNDROME | PHYSIOTHERAPY SYSTEMIC STEROID SYMPATHETIC BLOCKS |

TABLE VI

temic steroids. The danger of systemic steroids must not be overlooked and of course must not be prolonged. During the acute irritative phase with much muscle spasm, it is best to rest the arm in a sling and maintain movements by gentle exercises with gravity eliminated. As the pain and spasm settle, then the exercise program is increased to assisted active exercises. This can be done with the aid of a physiotherapist, or the patient can do it at home.

On occasions, regrettably only too often, despite adequate physiotherapy, the patient reaches a plateau in recovery. There is a limitation of all ranges of movement, painful only when forced. Occasionally the arm can be manipulated easily to 110 degrees of abduction and 45 degrees of external rotation under general anaesthesia. On occasions the manipulation has to be very forceful, and with these patients it is preferable to expose the shoulder joint surgically and to divide the tightened structures under direct vision. It will usually be found that the limitation of movement is due to a contracture of the subscapularis.

Frequently, because of the abnormal movements of the scapula, the patient with a diffuse rotator

cuff tendinitis develops a chronic acromio-clavicular strain with pain referred up the trapezius and local tenderness over the joint. In the majority of instances this responds to local injections of prednisolone reinforced, if necessary, with anti-inflammatory drugs by mouth. In some the pain remains with persisting disability even after shoulder joint movements have been restored, and the only way to get rid of this discomfort is to excise the outer inch of the clavicle to produce an arthroplasty, in effect, of the acromio-clavicular joint.

The popularity of acromionectomy in the past probably stems from the fact that one bonus of total acromionectomy is indeed an excisional arthroplasty of the acromio-clavicular joint. This arthroplasty allows greater freedom of movement of the scapula across the chest wall and therefore a greater ease of movement of the shoulder joint as a whole.

The possibility of entrapment of the supra-scapular nerve is always raised where there is gross wasting of the spinatae associated with marked tenderness. However, a similar clinical picture may be produced by complete rupture of the rotator

(Concluded on Page 388)

AUTOMATIC ELEVATOR BUTTONS AND HOSPITALS

There is evidence that some automatic elevators may be death traps in a fire. In a recent fire in New York City in a new 50-story office building in the financial district two building guards were killed when they were trapped in an elevator on the 33rd floor, the site of a fire. The cab doors were partly open. In another instance three lives were lost because of the unreliability of automatic elevators during a fire. An official report stated that the "unreliability of the elevators not only was hazardous to occupants but delayed fire-fighting operations". The report indicated that the sort of call buttons that are activated by the heat of the finger, rather than by pressure, could ac-

tivate a false call because of the heat of a fire.

A terrifying picture is evoked of passengers trying to flee a fire on a floor below them being carried involuntarily to the very location of the flames, with the door opening when they arrived at the site of the fire.

The official report continued: "Tests should be conducted on the inductance-type call buttons to determine if the products of combustion during a fire could bring about impedance changes, which would activate the device and put in a false call."

At least one hospital in the Rhode Island area has elevator buttons of this type. Perhaps this potential hazard should be investigated.

THERE IS HOPE

Sociologists, politicians, and journalists make much of the fact that several countries rank above the United States in infant and maternal mortality, as well as in other health indices. Statisticians of the Metropolitan Life Insurance Company give us some hope that matters are improving. In fact 1970 has been viewed by these statisticians as one of the better years. The mortality rate in the United States was slightly lower in 1970 than in 1969. The 1970 national death rate was estimated to be about 9.4 per 1,000 population compared with 9.5 in 1969. This represents the twenty-third consecutive year in which a death rate below 10 per 1,000 population was registered in this country.

Infant mortality, which reached a low of 21 per 1,000 live births in 1969, may show another low in 1970, and for the first time may well fall below 200 per 1,000 live births. The infant mortality rate in the United States will thus show a decline of almost 25 per cent from 1960 to 1970, compared with 11 per cent from 1950 to 1960.

Diseases of the heart, currently responsible for nearly two-fifths of all deaths in this country,

showed a slightly lower mortality rate in 1970 than in the previous year. The rate for ischemic heart disease, mainly coronary heart disease, decreased by about 1½ per cent. No significant change in the mortality rate from cerebral vascular disease, however, was noted while diabetes showed a slight increase in 1970.

Cancer, second only to heart disease as a cause of death, continued its gradual uptrend, showing a mortality rise of approximately 2 per cent in 1970. This small rise apparently reflects an increase in the death rate from cancer of the respiratory system. The death rate from cirrhosis of the liver was up by 6 per cent. Thus cigarette smoking and alcohol continue to take their relentless toll.

Provisional data indicate that the number of motor vehicle accident fatalities in 1970 declined by about 2 per cent from 1969, hopefully reflecting safer vehicles, safer highways, and driver education. The death toll from all types of accidents combined is also likely to be lower.

While we may not be Number One, we are at least making progress.



Book Review

AMA DRUG EVALUATIONS 1971. Chicago, American Medical Association, 1971. \$15.00, 1-10 copies; \$12.50, 11 or more copies.

The American Medical Association Council on Drugs here presents the First Edition of a new work mailed free to all members of the Association. It is a big book measuring 8 x 10 x 1½ inches of approximately 1,000 pages bound in paper. The 13 members of the Council on Drugs have had the assistance of over 300 consultants and the Department of Drugs of the AMA to draw up this major publication. In format there are 15 pages of general information, followed by 90 chapters of specific drug information and evaluation divided on the basis of therapeutic classification. Individual chapters are very short, begin with a general discussion of diuretics, anti-tussive agents, penicillins, and others; then present adverse reactions and details of specific available drugs by generic name, trade name, and dosage. There follows a 200-page section of monographs on 166 new drugs introduced in the last 10 years. Three valuable indices on indications, adverse reactions and drugs and a chart on drug dosage in children concludes the work.

The book has the dimensions and scope of a reference work, but its style is closer to a handbook, very readable and practical, and a remarkably simple, lucid, and candid exposition of drug therapy. Unlike package inserts, the Physician's Desk Reference and textbooks on Pharmacology, it can be read easily and rapidly and on many a page yields a "shock of recognition" for the practicing physician. The discussion of drugs in treatment is didactic, often dogmatic: "Treatment of atrial tachyarrhythmia is aimed at controlling the ventricular rate. The digitalis group are the agents of first choice for this purpose"; and "Erythromycin is perhaps the safest of the antibiotics that are used today." No substantiation of drug evaluations is offered and there are no references to the literature. This disembodied and simplistic approach to the complexity of drug therapy is defended at the outset; "the evaluative or interpretive information in the book, particularly on controversial matters, may necessarily disagree with the opinions from some other sources. Statements are based on the convergent trend of the best information available . . ." But this argument is no defense. Consequently, the book is authori-

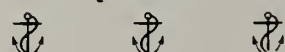
tarian and invites controversy, but also sets up a standard that is very difficult to establish and long maintain without modification.

The major area of controversy must surely develop around the attack the book makes on mixtures of drugs. "All the sulfonamides are bacteriostatic rather than bacteriocidal; therefore, combinations of sulfonamides with penicillin are theoretically irrational because penicillin is effective only again metabolizing bacteria." Agreed, but: "APC: Probably the most frequently used mixture of analgesic drugs; however, rationale for the combination is unsound." And there follows throughout the book an enormous number of mixtures designated "irrational", or "irrational — not recommended." These include Butibel*, Combid*, Donnatal*, Fiorinal*, Kolantyl*, Percodan*, and paregoric to name a few. Another quotation: "Opinion is divided whether tetracycline in combination with an antifungal agent is important . . ." The problem of drug mixtures is a vexed one, an area of controversy that will no doubt increase when the Food and Drug Administration publishes its promised compendium of "efficacy ratings" established for 2,824 drugs by the National Research Council. Banned drugs are expected after that publication. Drug Evaluations may well be a persuasive preview to what could become coercion from the F.D.A. It is refreshing to find in chapter 45: Cold Remedies: "Rational therapy for the common cold has not been achieved." No doubt there are other areas where this is equally true. The most useful statement on drug mixtures has come from Dr. Louis C. Lasagna. He summarizes the characteristics of a satisfactory mixture as follows: 1. The ingredients deserve to be used together in recognized, definite clinical conditions on the basis of their therapeutic and toxic potential; 2. The ratio of ingredients has been shown to work satisfactorily for a significant body of patients; 3. Laboratory investigation indicates no pharmaceutical incompatibility of the ingredients.

Drug Evaluations 1971 is an important book for the practicing physician. It is closer in form to an official Medical Letter than to the familiar PDR. While it looks like a forbidding reference work, it is very readable, very controversial, and it breaks new ground. The present morass of drugs in America needs a thorough cleanup which this book might very well accomplish. Recommended.

*—Registered.

JOHN F. W. GILMAN, M.D.



Editor's Mailbox

Sirs:

I am writing to comment upon the editorial published in the March issue of the JOURNAL: *Tri-State RMP: a Medical School Hospital Bonanza?* This communication represents the response of an individual and does not necessarily reflect the opinion of the State Advisory Committee for regional medical program (RMP). I did have the honor of serving with the Rhode Island Advisory Committee from its inception in 1967. For three years I served as chairman of the state committee and relinquished that post in May, 1970. I am currently serving as the Society Delegate and Trustee to the Medical Care and Education Foundation, Inc. who are the incorporators of the parent body of Tri-State RMP.

Several points in the editorial do require further comment.. Regional Medical Programs are currently in a state of flux. Originally organized to direct a scientific attack on heart disease, cancer, and stroke, the directions of the regional medical programs have undergone a series of changes over the past several years. These changes have been brought about by the difficulties in organization, "a drying up" of federal funds, and the difficulties of implementing the program as originally conceived. The opinion was expressed that "Tri-State has a greater responsibility to search out areas where groups do not have the finesse and financial status of the medical school-medical center complex, and to aid such groups and agencies to formulate vital community programs that will bring about improvement in medical care, for heart, stroke, and cancer." Experience has shown that community groups and community hospitals have been unable or unwilling to initiate programs related directly to RMP. This has not been a local or a New England finding, but has occurred nationally. Whether these are due to problems that lie within the community centers or reflect a long standing disaffiliation between the community hospital and the medical school-medical center complex I do not know. The Rhode Island committee had, however, on two occasions written to and by personal visit contacted all physicians and all health care facilities within the state of Rhode Island in an attempt to initiate interest in programs which could receive RMP funds and sponsorship. To date the results have been meager indeed. Medical schools have received the bulk

of the money because they are organized, willing, and able to put together worthwhile programs and to implement them. It is incumbent upon the Advisory Committees and the Trustees to encourage or even to direct that medical center originated programs have community outreach or specifically intend to increase the quality or efficiency of care in community centers.

Another point in the editorial mentions a 40-man administrative staff with \$1,782,314 of \$2,404,685 year marked for personnel and administrative expenses. The comment is that this is "top heavy". From years of experience with voluntary health organizations it has become evident to me that the initiation and operation of programs of community service requires huge inputs of time and personnel in order to generate, activate, and maintain these programs. The administrative staff of RMP in Rhode Island had devoted considerable amounts of time and energy, bringing diverse groups together and participating in a "brokerage" of people, ideas, and funds, some of which have come from these groups themselves and not from regional medical programs..

Finally the regional medical programs are in a position to bring together concerned citizenry, community health projects, hospitals, and practitioners in an effort to advance the quality and efficiency of medical care within the geographical area of its influence. This latter function is, I believe, a most needed ingredient in which the Rhode Island Medical Society should be an eager and active participant.

MELVIN D. HOFFMAN, M.D.

* * *

Sirs:

The Rhode Island Advisory Committee of the Tri-State Regional Medical Program has reviewed the editorial published in the February issue of the RHODE ISLAND MEDICAL JOURNAL,, which comments upon several aspects of its organization, its administration and its activities as represented by various funded projects and programs. While recognizing the right, or even the duty of the JOURNAL to report upon the Tri-State Regional Medical Program, especially in regard to its work in Rhode Island, the Advisory Committee wishes to inform the JOURNAL and its readers of some of the factual omissions and to clarify the role of the Tri-State Regional Medical Program in this State and in New England.

(Continued on Page 384)

UTILIZATION OF *IN VITRO* CELL SOMATIC CULTURES FOR GENETIC ANALYSIS

(Continued From Page 366)

C57BR/cdJ, C58/J, CE/J, DBA/2J, DE/J, DW/J, LP/J MA/J PL/J P/J, RARF, RF/J, SJL/J, ST/bJ, 129/J, BUB/Bn, CBA/J, CBA/CaJ, C3HeB/FeJ, C57BL/6J, C57BL/6J-*ob*, SEA/GJ, and SWR/J were surveyed for hexokinase forms I-III, but no electrophoretic variants were observed in these inbred lines. This survey was conducted employing two concentrations of glucose to visualize both the high and low K_m forms of the enzyme.

Hexokinase is widely distributed in the tissue of the mouse. Figure 6 presents the electrophoretic patterns of ten tissues. Liver, kidney, heart, spleen, muscle, brain, intestine, lung, testes and erythrocytes were all assayed for the three forms of hexokinase. Forms I and II were found in all of these tissues, although in varying proportions. Liver, kidney, spleen, erythrocytes, and testes all seemed to have relatively high levels of these two forms. Heart, muscle, intestine, and lung had lower levels. Only the liver, heart, spleen, muscle, testes, and lung possessed form III. Figure 6 clearly presents the various levels of enzyme activity in the different tissues.

The testes contained a fourth band, which migrated very slowly, and appeared near the origin (Figure 6). This band has been observed by Katzen *et al.*,¹⁵ in the rat and designated sperm type hexokinase. When preparations of the females uterine edipose tissue, a tissue metabolically and morphologically analogous to the male's epididymal fat pad, were subjected to electrophoresis, no sperm type hexokinase was observed. Also the sperm type hexokinase only appeared in mature testes. It appears that this form of hexokinase is derived from sperm in the epididymis.

Hexokinase was expressed in fibroblasts derived from mouse fetuses which were maintained in continuous cultivation *in vitro* for over one year. Two bands of hexokinase activity were observed. In cells derived from kidney epithelial tissue only one band was present in the enzyme phenotype, but in other lines, such as those derived from fibroblasts, two hexokinase bands appeared. The two bands of hexokinase expressed in tissue culture (Figure 7) have been shown to be identical to forms I and II of the *in vivo* forms.

In Figure 8 two parental cell lines, LM(TK-)

cells, derived from connective tissue fibroblasts taken from C3HeB/FeJ mice, and RAG cells, derived from renal adenocarcinoma tissue from BALB/cJ mice, are shown in channels 1 and 2, and 5, respectively. The LM(TK-) cells express both forms of I and II of Hexokinase, but the RAG cells only express form I. Channels 3 and 4 show the phenotypes of mouse x mouse cell hybrids between LM(TK-) cells and RAG cells. Both forms I and II of Hexokinase are expressed in the hybrid which expresses the phenotype of the LM(TK-) parent.

The human form of hexokinase expressed in WI 38 cells is shown in channel 6 of Figure 7. The phenotype of this human cell line possess two hexokinase bands which appear to be related to forms I and II in the mouse, but both forms I and II of the human enzyme migrate faster than their counterparts in the mouse. Thus there is interspecific variation between both forms I and II of hexokinase for the mouse and human species.

The differential expression of the hexokinase isoenzymes in various tissues presents an interesting model for gene regulation. In the mouse x mouse cell hybrids, discussed earlier, both forms I and II of the parental LM(TK-) cells were expressed even though the genome of the parental RAG cells only contained form I hexokinase. Such a system raises several possibilities concerning the regulation of these two forms of hexokinase. Assuming that these two forms of enzyme are produced by two distinct genetic loci, there are several possible mechanisms which could explain the results of the hybridization experiment. The RAG cells could possess an active regulator gene which could produce a repressor that prevents the production of the form II hexokinase by interacting on several possible levels. The LM(TK-) cells could have a regulator gene which represses the repressor of the form II hexokinase. Thus the hybrid cell would contain the repressor of the LM(TK-) cell line which could also repress the repressor of the RAG form II hexokinase. Thus both genomes would be expressing both forms of hexokinase. It is also possible that the form II hexokinase in the hybrid pattern is solely the result of the active form II gene, contributed by the LM(TK-) parental cell line. There are numerous other hypotheses that could be fomented to explain the results of these hybridization experiments, but to determine which explanation is applicable, requires a more informative system. Currently

(Continued on Page 379)

UTILIZATION OF *IN VITRO* CELL SOMATIC CULTURES FOR GENETIC ANALYSIS

(Continued From Page 378)

such a system is being created by hybridizing LM(TK-) cells and RAG cells with human cell lines. As discussed earlier, the human cell lines have two forms of hexokinase which have electrophoretic mobilities distinctly different than their counterparts in the mouse cell lines. Thus if all mouse and human genes are expressed in the hybrid, four bands of hexokinase will be observed. Knowing which of these possibilities is the result of the hybridization experiments will aid greatly in our understanding of the differential expression of hexokinase and can also lead to the localization of a regulator gene on a specific chromosome by employing the marker system discussed above. Although the hybridization experiments will not be done as part of this study, other members of the lab are using this system to conduct this type of analysis.

The difference in electrophoretic mobility between the human and mouse cell lines for the two forms of hexokinase can be further utilized to map the hexokinase gene loci on the appropriate human chromosome by combining this variation with the human x mouse cell hybrid system. The inter-specific variation between mouse and human samples also raises several questions concerning the evolution of this enzyme. Both forms I and II of the human enzyme migrate approximately the same distance from the analogous forms of the mouse enzymes. It appears that the more negatively charged enzymes were selected for in this example in the human. This result could also indicate that the forms I and II are actually structural permutations of a similar subunit, since the same electrophoretic variation is seen in both forms of the enzyme in this case. These results can be resolved by more extensive and more revealing studies on the hexokinase system.

DEOXYRIBONUCLEASE: PRELIMINARY STUDIES

Several enzymes called deoxyribonucleases, DNases, are capable of hydrolyzing highly polymerized DNA. These enzymes are found in various cells and although some of their properties are similar, many are rather unique. The enzyme has been extensively purified from *E. coli* and several forms have been characterized (Jorgensen and Koerner¹²), but no efficient technique has been

(Continued on Next Page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

Hopkins

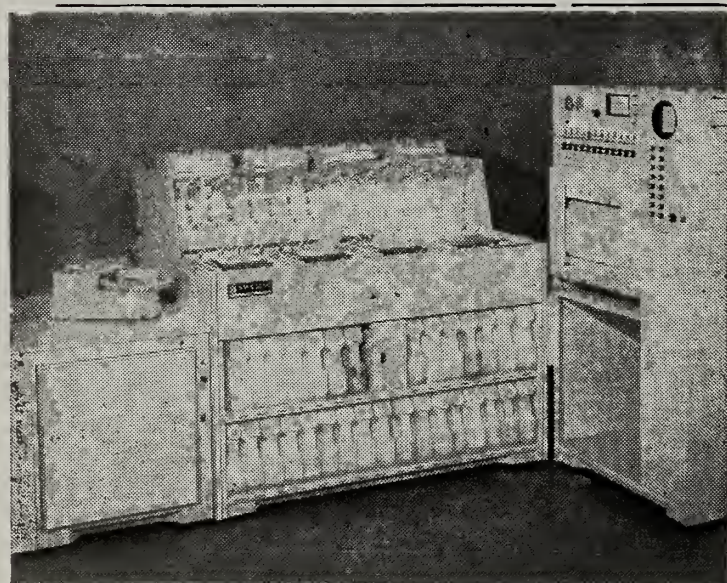
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

developed for selectively visualizing DNase on a starch gel electrophoretic system. My current research is directed at developing such a system for DNase, especially since this enzyme would be very interesting to study in *in vitro* cell cultures. In this brief discussion I should like to present what has been accomplished with this system and also to indicate the type of questions which this research should raise.

The major source of DNase activity has been pancrease homogenates. Mice were killed by anesthetization with ether and/or by cervical dislocation. The pancreases were extracted, placed in isotonic saline (0.85 per cent), and homogenized in a Potter-Elvehjem tissue grinder in a mass of distilled water equal to the mass of the tissue. The homogenates were then frozen and thawed twice, and centrifuged at 29,000g for two hours at 4° C. The supernatant was stored at -90° C (Revco® Freezer) for 2-3 days before use. The extracts were thawed rapidly and centrifuged at 29,000g for one hour before electrophoresis. Electrophoresis was conducted in a vertical, center slot, starch gel (Bulcher) using a Tris-EDTA-borate buffer system. A stock buffer containing 0.9M Tris, 0.02 M tetrasodium salt of EDTA, and 0.5M boric acid at pH 8.6 was used in a dilution of 1/20 for the gel buffer, 1/5 for the cathode bridge buffer, and 1/F for the anode bridge buffer. Electrophoresis was conducted for 16 hours at 10 volts/cm across the gel at 3° C. When electrophoresis was completed, the gel was sliced and placed on an acrylamide staining plate. This plate was made according to the technique of W. Doane⁵, except that 10 ml containing 40 mg of DNA (deoxyribonucleic acid) was added to the mixture instead of the 10 ml of 3 per cent starch. The gel was incubated on this plate for two hours at 37° C, and then removed and allowed to cool to room temperature. The staining plate was removed from the gel and immersed in a 5 per cent solution of toluidine blue. The background of the plate turns deep blue and the areas of DNase activity appear as clear bands.

From several preliminary studies it appears that there are two main forms of DNase in the pancrease of the mouse. One form migrates to the anode and the other to the cathode. I have designated the anodally migrating enzyme type I DNase and the cathodally migrating form as type II DNase. Although this preliminary work is very encouraging, several other studies must be conducted to determine if these bands are actually

due to DNase activity or whether they are the result of some other reaction with the staining plate. Several more months of careful experimentation should produce a reliable and accurate system for directly assaying DNase activity on a starch gel system.

If DNase is expressed *in vitro*, it would be possible to study the level of this enzyme at different times in the cell cycle by using synchronized cell cultures. The relation of DNase activity or production and the division of the cells could then be elucidated. It would also be desirable to survey the inbred strains of mice to search for a DNase variant which could aid in understanding the genetic control of this enzyme and could also be used as a somatic marker in cell hybrid experiments. The relationship of DNase activity to the invasion of a cell population by foreign DNA, such as by a virus, would indicate if this enzyme plays a role in defending the cell from foreign DNA.

This work has been included in this report to indicate how an electrophoretic technique is developed for a specific enzyme system. This work must now be extended to produce the type of genetic and somatic cell culture information about this enzyme as has been presented for GOT, GPI, and hexokinase.

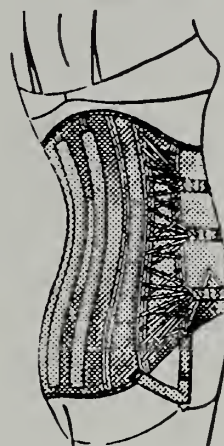
DISCUSSION

In this research effort four new isozymic markers have been developed. The GOT and GPI enzyme systems have been extensively studied and their genetic control illustrated. The hexokinase system is still being studied to complete the analysis of its genetic control and the new techniques for staining deoxyribonuclease are just being adapted to electrophoretic systems to allow the genetic analysis of this important enzyme system. The purpose of the development of these markers was to analyze these enzymes in *in vitro* somatic cell cultures and hybrid systems to develop a system of enzyme analysis in somatic cell cultures that would be applicable to the study of human disease.

As alluded to earlier in this report, the use of isozyme markers in the mouse x human hybrid cell lines can be a powerful tool in mapping and understanding human chromosomes. The work in this report on GOT, GPI, and hexokinase is currently being utilized by several laboratories to map these enzymes on specific human chromosomes. It will not be long before each one of these markers is mapped. One difficulty that has arisen in mapping enzymes to specific human chromosomes is

(Continued on Next Page)

RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION
WALKERS — CRUTCHES — CANES**

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

the difficulty in distinguishing some forms of human chromosomes from others on a morphological level. This obstacle is being circumvented at the present time by tagging specific chromosomes with radioactively labeled hybridized RNA. It is hoped that the development of this technique will greatly enhance the speed and accuracy of somatic cell genetic analysis.

Although the use of specific enzyme markers for the study of disease states has been limited mainly to laboratory experiments, the employment of genetic markers and enzymatic studies in several clinical fields is not too far in the future, and in reality it has already begun. With the advent of transabdominal amniocentesis (Fuchs⁷) and the culturing *in vitro* of amniotic fluid cells (Nadler²⁰) simple genetic and enzymatic studies on fetuses *in utero* have become possible through *in vitro* somatic cell genetic studies. The application of the enzyme markers developed in this research to these clinical systems is now in process. One of the simplest and most powerful tests now available using this technique is the cytogenetic diagnosis of Down's syndrome *in utero* (Valenti³⁰). By karyotyping *in vitro* cultured fetal cells obtained *in utero* by amniocentesis, it has now become possible to diagnose the trisomy of chromosome 21 in Down's syndrome. This clinical information now provides the physician with information concerning the genetic soundness of the child. Intrauterine diagnosis of the hurler and hunter syndromes (Fratantoni⁶), the prenatal detection with amniotic fluid cells of the Lesch-Nyhan mutation (DeMars⁴), and the recent study of patterns of enzyme development utilizing cultivated human fetal cells derived from amniotic fluid (Nadler²⁰) are other examples of the feasibility of utilizing *in vitro* somatic cultures of human amniotic fluid cells for the diagnosis, prevention, and understanding of several human diseases.

There are numerous diseases which are manifested by the lack or production of abnormal enzymes or proteins within cells which could also be detected with the application of enzyme markers to somatic cell cultures. Von Gierke's disease, hepatic glycogenesis, McArdle's disease, Pompe's disease, galactosemia, phenylketonuria, and numerous other conditions which might be diagnosed *in utero* with this type of approach. The major limitation on the medical aspects of these diagnostic procedures lies in the ability to develop numerous enzyme markers and assays for the specific enzymes involved in a given disease state. This research has

demonstrated that new isozyme markers can be developed and applied to somatic cell cultures to elucidate the control of specific enzyme systems. It is hoped that several laboratories will take up this challenge to develop new enzyme markers which will be useful in clinical diagnosis in the future.

By slowly building up a catalogue of enzyme markers it will eventually be possible to diagnose many diseases *in utero* and thus give the physician a greater insight into the medical status of a developing fetus. Families could then be given the option of having defective children depending on the legal and moral status of the patient. The most important ramification of this type of diagnostic information would be the time that it would give the physician in terms of early diagnosis of serious diseases before they have developed damaging conditions in the infant. Although it is not practical at the present time to screen every fetus *in utero* for detectable diseases, it is possible and highly recommended that fetuses with high risk factors for specific diseases be tested. This is currently the practice with Down's syndrome in some states such as Colorado, where women over 30 years of age are advised to have this test. Thus by selecting a smaller high risk population, this type of screening diagnostic testing can be very valuable clinically.

The research presented in this paper indicates that it is only a matter of time and technique until much of the human chromosome will be mapped with enzyme markers such as the mouse and fruit fly systems. It has also been indicated that in the near future clinicians will probably have accessible to them the option of doing very comprehensive surveys concerning the genetic structure of children *in utero*. The potentials of this methodology for eradicating and preventing many human diseases is just being realized. There is little doubt that the *in utero* diagnosis of several diseases will be a standard aspect of medical practice in the next decade. Thus it is important for every physician to have some understanding of how this field is developing and how his particular work in medicine will be affected by these new developments in somatic genetic research.

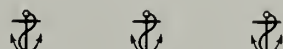
ACKNOWLEDGEMENTS

I would like to thank Dr. Frank Ruddle for his invaluable interest and assistance in conducting this research. Dr. Thomas Shows also provided several helpful suggestions. The technical assistance of Miss Elizabeth Nichols was also greatly

appreciated. I would like to further acknowledge The Plenum Publishing Corporation for allowing me to utilize several previously published photographs from *Biochemical Genetics*.

REFERENCES

- ¹Babson AL, Shapiro PO, Williams PA et al.: The use of a diazonium salt for the determination of glutamic-oxalacetic transaminase in serum. **Clin Chim Acta** 7:199-205, Mar 62
- ²DeLorenzo RJ, Ruddle FH: Glutamate oxalate transaminase (GOT) genetics in **Mus musculus**: linkage, polymorphism, and phenotypes of the Got-2 and Got-1 loci. **Biochem Genet** 4:259-79, Apr 70
- ³DeLorenzo RJ, Ruddle FH: Genetic control of two electrophoretic variants of glucosephosphate isomerase in the mouse (**Mus musculus**). **Biochem Genet** 3:151-62, Apr 69
- ⁴DeMars R, Sarto G, Felix JS, et al.: Lesch-Nyhan mutation: Prenatal detection with amniotic fluid cells. **Science** 164:1303-5, 13 Jun 69
- ⁵Doane WW: A novel approach to the analysis of enzymes separated by disc electrophoresis. **SABCO J** 3:63-8, 1967
- ⁶Fratantoni JC, Neufeld EF, Uhlendorf BW, et al.: Intrauterine diagnosis of the Hurler and Hunter syndromes. **New Eng J Med** 280:686-8, 27 Mar 69
- ⁷Fuchs F: Genetic information from amniotic fluid constituents. **Clin Obstet Gynec** 9:565-73, Jun 66
- ⁸Gartler SM, Pious DA: Genetics of mammalian cell cultures. **Humangenetik** 2:83-114, Jun 66
- ⁹Grossbard L, Weksler M, Shimke RT: Electrophoretic properties and tissue distribution of multiple forms of hexoginase in various mammalian species. **Biochem Biophys Res Commun** 24:32-8, 6 Jul 66
- ¹⁰Harris H: Enzyme polymorphisms in man. **Proc Roy Soc (Biol)** 164:298-310, 22 Mar 66
- ¹¹Howe C, Morgan C: Interactions between Sendai virus and human erythrocytes. **J Virol** 3:70-81, Jan 69
- ¹²Jorgensen SE, Koerner JF: Separation and characterization of deoxyribonucleases of **Escherichia coli** B. I. Chromatographic separation and properties of two deoxyribo-oligonucleotidases. **J Biol Chem** 241:3090-6, 10 Jul 66
- ¹³Katzen HM: Multiple forms of mammalian hexokinase and their significance to the action of insulin. In Weber G, editor: **Advances in Enzyme Regulation** 5:335-56, 1966.
- ¹⁴Katzen HM, Shimke RT: Multiple forms of hexokinase in the rat: tissue distribution, age dependency, and properties. **Proc Nat Acad Sci USA** 54:1218-25, Oct 65
- ¹⁵Katzen HM, Soderman DD, Cirillo VJ: Tissue distribution and physiological significance of multiple forms of hexokinase. **Ann NY Acad Sci** 151:351-8, 14 Jun 68
- ¹⁶Krahl ME: **The Action of Insulin on Cells**. New York and London, Academic Press, 1961
- ¹⁷Matsuya Y, Green H, Basilico C: Properties and uses of human-mouse hybrid cell lines. **Nature** 220:1199-1202, 21 Dec 68
- ¹⁸McKusick VA: **Mendelian Inheritance in Man**. Baltimore, The Johns Hopkins Press, 1966
- ¹⁹Miggiano V, Nabholz M, Bodmer W: Hybrids between human leukocytes and a mouse cell line: production and characterization. **Wistar Inst Sympos Monogr** 61-76, 1969
- ²⁰Nadler HL: Patterns of enzyme development utilizing cultivated human fetal cells derived from amniotic fluid. **Biochem Genet** 2:119-26, Sep 68
- ²¹Pontecorvo G: Methods of microbial genetics in an approach to human genetics. **Brit Med Bull** 18:81-4, Jan 62
- ²²Ruddle FH: Isozymic variants as genetic markers in somatic cell populations **in vitro**. **Nat Cancer Inst Monogr** 29:9-13, 68
- ²³Schimke RT, Grossbard L: Studies on isozymes of hexokinase in animal tissues. **Ann NY Acad Sci** 151:332-50, 14 Jun 68
- ²⁴Schneeberg EE, Harris H: An ultrastructural study of inter-specific cell fusion induced by in activated Sendai virus. **J Cell Sci** 1:401-6, Dec 66
- ²⁵Shaw MW, Cohen MM: Chromosome exchanges in human leukocytes induced by mitomycin C. **Genetics** 51:181-90, Feb 65
- ²⁶Shows TB: The amino acid substitution and some chemical properties of a variant human erythrocyte carbonic anhydrase: Carbonic anhydrase Id-Michigan. **Biochem Genet** 1:171-95, Sep 67
- ²⁷Silagi S: Hybridization of a malignant melanoma cell line with L cells **in vitro**. **Cancer Res** 26:1953-60, Nov 67
- ²⁸Smithies O: Zone electrophoresis in starch gels and its application to studies of serum proteins. **Adv Protein Chem** 14:65-113, 59
- ²⁹Stern C: **Principles of Human Genetics**. Second edition. San Francisco, W. H Freeman and Company, 1960
- ³⁰Valenti C, Schutta EJ, Kehaty T: Cytogenetic diagnosis of Down's syndrome in utero **JAMA** 207:1513-15, 24 Feb 69
- ³¹Weiss MC, Ephrussi B, Scaletta LJ: Loss of T-antigen from somatic hybrids between mouse cells **Sci USA** 59:1132-5, Apr 68
- and SV40-transformed human cells. **Proc Nat Acad Sci USA** 58:1104-11, Sep 67



ONE SENTENCE ESSAY

Shakespeare on Relevance

Thou art not for the fashion of these times,
where none will sweat but for promotion.

AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

(Continued From Page 377)

By good chance, the Rhode Island Advisory Committee and the staff in Rhode Island had decided in mid-winter to publish and distribute throughout the State a progress report, the first since the spring of 1968, in order to acquaint persons and organizations concerned with health matters about developments since then. This report has now been distributed and should provide adequate clarification of RMP philosophy and

100 Wampanoag Trail East Providence
Tel. 438-4275
JCAH Accredited

The activities of the Advisory Committee and Study Groups are supported by the staff of the Rhode Island Coordinator's office. The Advisory Committee and the Study Groups have reviewed and passed on different grant applications from the Tri-State region and have endorsed for Rhode Island the priorities in the field of Heart, Cancer, Stroke and Kidney.

II. The following grant applications from Rhode Island have been approved and funded by the regional organization:

1. In January 1970 the Nutrition Council of Rhode Island received a grant for \$46,500 to establish a statewide Diet Counseling Service. In January 1971 the National Council in Washington approved extension of this grant with an additional sum of \$339,247 for the period from January 1971 to December 31, 1971.

2. From the National Division of the Regional Medical Programs, a grant to Roger Williams General Hospital in the amount of \$48,500 to establish a permanent linkage between that hospital and three of the Neighborhood Health Centers.

3. From Tri-State Regional Medical Program CORE staff funds to Miriam Hospital a grant in the amount of \$20,000 to establish a linkage between that hospital and the Neighborhood Health Centers.

4. From Tri-State RMP CORE staff funds of \$6,000 to R. I. Health Services Research to study the Impact of Brown University Program in Medical Science on the quality of Care and Costs of Operations in Affiliated Hospitals.

5. From the Tri-State Regional Medical Program CORE staff funds \$15,000 to the Health Planning Council to study the feasibility to plan centralized laboratory services in three Rhode Island hospitals.

6. \$14,000 to the Hattie Ide Chaffee Nursing Home for planning a program for improving chronic disease care in nursing home situations in Rhode Island. In addition to RMP monies the Hattie Ide Chaffee Nursing Home provides \$5,500 and the R. I. Division of the American Cancer Society awards \$2,500, thus the total planning grant is \$22,000.

The total amount of money made available to Rhode Island through the Regional Medical Programs up to now is \$189,247.

III. Other Grant Applications, either approved or in Review Process:

1. Approved but not funded yet a grant application for a teaching program in Emphysema (a

cooperative training program between hospitals in New Hampshire, Massachusetts and Rhode Island) with first year budget in the vicinity of \$90,000.

2. A grant application in process to support coordinated services for stroke patients in Rhode Island.

3. In planning and revision phase a grant application to link the Neighborhood Health Centers in Pawtucket with the Pawtucket Memorial Hospital.

4. In planning phase a grant application to evaluate the results of multiphasic screening.

IV. The Rhode Island Advisory Committee is in the process of sending out a letter to all physicians and health agencies in Rhode Island informing them of the progress made in the different Regional Medical Programs.

V. According to the new Operating Rules and Procedures endorsed by the R. I. Advisory Committee in September 1970, the nominations for membership are in and will be presented to the Advisory Committee on February 24, 1971. Several new members will be added. Certain agencies will have automatic membership (R. I. Heart Association, R. I. Cancer Society, Comprehensive Health Planning, Health Department, and Governor's representative). The membership in the new Advisory Committee will be 37. Among them are 17 doctors, the rest represent nurses, hospital administrators, social workers, university professors and consumers.

JOHANNES VIRKS, M.D.

Chairman, Rhode Island Advisory
Committee on Heart Disease, Cancer,
Stroke and Related Diseases

(Continued on Next Page)

ONE SENTENCE ESSAY

We have to defend the country against mediocrity; mediocrity of soul, mediocrity of ideas, mediocrity of action.

... Abraham Flexner, Expressing his philosophy of education

* * *

HAND LETTERED SIGN ON STORE WINDOW
IN ROCKLAND, MAINE

FATHER'S DAY SPECIAL

WORK PANTS

REG. 2.95 PR.

TWO FOR \$5.00

NEW LEGISLATION FOR REGIONAL MEDICAL PROGRAMS

On October 30, 1970 President Nixon signed into law new legislation affecting Regional Medical Programs. Here is a comparison of the old legislation which expired June 30 and the new.

| SUBJECT | OLD LEGISLATION (P.L. 89-239) | NEW LEGISLATION (P.L. 91-515) |
|--|---|--|
| 1. Categorical Emphasis | Heart disease, cancer, stroke and related diseases | Adds kidney disease, and other related diseases. |
| 2. Additional Emphases | Emphasis on making available the latest advanced in diagnosis and treatment, and on cooperative arrangements for research, training and related demonstrations of patient care. | Promotes medical data exchange as well as research, training, and demonstrations of patient care. Adds prevention and rehabilitation. Gives additional emphasis to regionalization of health care resources and services in order to strengthen and improve primary care and the relationship between primary care and specialized care. Concerned with increasing capacity as well as quality and with areas with limited health services. |
| 3. Construction Authority | Limited to "alteration, major repair, remodeling and renovation of existing buildings . . . and replacement of obsolete built-in . . . equipment of existing buildings," up to 90 per cent of cost. | Adds authority to include "new construction of facilities for demonstrations, research and training when necessary to carry out Regional Medical Programs," but only up to a level of \$5 million per year. |
| 4. Non-Interference Clause | To accomplish the goals of the program "without interfering with patterns or the methods of financing, or patient care or professional practice or with the administration of hospitals . . . " | No change. |
| 5. Relationships to Comprehensive Health Planning | None specified in law. | Requires that the appropriate regional, metropolitan, or local areawide comprehensive health planning agency 314(b), have an opportunity to consider operational grant proposals before the RAG may recommend approval. |
| 6. Duration — Authorization Levels (in Millions) | | Three-year extension FY '71 \$125 FY '72 150 FY '73 250 Includes provision that no more than \$15 million shall be available for kidney disease activities in FY '71. |
| 7. Funding Mechanism | Grants, with two-year availability of funds. | Adds contract authority as well as RMP grant authority, and would permit Regions to obtain services in-kind from Federal agencies. One-year availability of funds. |
| 8. Regional Advisory Groups | Composition Requirement there must include "practicing physicians, medical center officials, hospital administrators, representatives from appropriate medical societies, voluntary health . . . " and other health-related agencies . . . " and members of the public . . . " familiar with health needs. Procedures Has responsibility for approval of operational grants at regional level. | Requires official health and health planning agency representation on such advisory groups; requires that public members include persons familiar with the financing of, as well as the need for services, and that such public members be sufficient in number to insure adequate community orientation. Also includes a representative of the Veteran's administration as an ex officio member, if there is a VA institution in the Region. |

ONE SENTENCE ESSAY

Solutions to problems create problems.
... Loren Eiseley, anthropologist

DERMAQUIZ ANSWER

(See Page 344)

Left, Dermatitis Papularis Nigra, a pigmented nevus (mole) common in the Negro.
Right, Pediculosis pubis (crabs) in armpit.

| SUBJECT | OLD LEGISLATION (P.L. 89-239) | NEW LEGISLATION (P.L. 91-515) |
|--|---|---|
| 9. National Advisory Council | Advisory Council responsible for RMP matters. Sixteen members — leaders in fields of fundamental sciences, medical sciences, or public affairs. At least 2 practicing physicians, one expert each for heart disease, cancer and stroke. | Increases the size of the Council from 16-20 members. Provides for: <ol style="list-style-type: none"> 1. one member who is outstanding in the study or care of kidney disease; 2. leaders in the field of health care administration as well as the fundamental and medical sciences; 3. two members outstanding in the field of prevention of heart disease, cancer, stroke or kidney disease; 4. four of the twenty should be members of the public. |
| 10. Listing of Advanced Facilities | Lists of facilities equipped and staffed to provide the most advanced methods of diagnosis and treatment in heart disease, cancer and stroke are to be established. | Adds a requirement that a listing of the most advanced facilities for the diagnosis and treatment of kidney disease including the availability of advanced specialty training be established and maintained. |
| 11. Multiprogram Services — Section 910 | Provides for grants for services needed by, or which will be of substantial use, to any two or more regional medical programs. | Provides for both grants and contracts for a broad variety of activities including: activities of use to two or more regional medical programs, development or demonstration projects, collection of epidemiologic data, development of training, and conduct of cooperative clinical field trials. |



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

THE PAINFUL SHOULDER DUE TO ROTATOR CUFF TENDINITIS

(Concluded From Page 374)

cuff. Before surgical exploration of the nerve is undertaken denervation potentials should be demonstrated by electromyographic studies.

SHOULDER-HAND SYNDROME

The last lesion to discuss is the shoulder-hand syndrome. There are one or two points that have to be emphasized. The patients who develop the shoulder-hand syndrome are similar to those who develop a Sudek's atrophy. They are timid, afraid of hurting themselves, probably having a low pain threshold, and unduly fearful of doing anything that may aggravate their discomforts and prolong their disability. They tend to nurse their painful members, carrying their affected hands around as though they were covered in oil and they do not want to dirty their clothes or the furniture. This syndrome can be aptly described as "ocular-palmar palsy" — the patients just sit around all day looking at their poor painful member. Like the beggars in the bazaars of Benares in India, who do this deliberately, that is to say, who deliberately hold down their hand, to the side for two or three days at a time, they will get a swollen painful hand. Blood will not run uphill. It has to be pumped back to the heart from the arm, and this is done by clenching the fist, flexing the wrist, and extending the wrist and elbow. If this is not done because of fear of pain, then the resulting venous stasis will produce edema, and eventually a pericapsular fibrosis will develop with resulting pain and stiffness on moving the joints of the hand. It is easy to see how once this additional pain is added a vicious cycle can develop.

Occasionally a sympathetic block by increasing the blood flow provides a force to increase the venous drainage, and repeated blocks combined with firm physiotherapy have been used effectively as treatment. The best treatment, however, is to recognize the type of patient likely to get the lesion and from the outset insist on movements of the hand, fingers, and wrist. If despite this the lesion develops, then probably the best method of management is to start the patient on steroids, set up a detailed exercise program that demands specific exercises to be carried out for fifteen minutes every hour, and combine this with a daily check of progress at a Physiotherapy Department.

SUMMARY

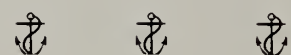
Rotator cuff tendinitis (Table VI) presents as

a series of symptom complexes, depending on whether the lesion is local or diffuse. These symptom complexes are readily identified, and each demands a specific type of therapy. Although this is an over-simplification of an ill-understood problem, it is hoped that by presenting it in this manner it will be possible to direct treatment along rational lines.

REFERENCES

- ¹DeBEYRE J, PATTE D, ELMELIK E: Repair of ruptures of the rotator cuff of the shoulder. *J Bone Surg* 47 B: 36-42, Feb 65.

1849 Yonge Street
Toronto, Ontario



CHAPIN ORATION: PATIENTS AND DOCTORS

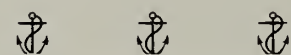
(Concluded From Page 358)

the use of physician's associates, and other newer techniques of potential future help in practice.

The second year of postgraduate training will be spent in specialty rotations in the medical center, learning those parts of the particular specialties which will be most useful to him in his practice.

Adventures of this type will not be successfully tried by schools long established and fixed in their ways. They could never gain approval of the faculty. They cannot be mounted by new schools, because both the faculty and students have to prove themselves by jumping all the usual hurdles. They can be tried by strong schools in mid-course who have the tradition of producing excellent clinicians. Duke University was the ideal school to sponsor the physician's associate program. Who will give the production of M.D. generalists a real try?

Eugene A. Stead, Jr., M.D.
Professor of Medicine, Duke University
Director, Regenstrief Foundation for Research in Health Care



FOR SALE or LEASE Attn. Physicians & Dentists OF ALL SUBSPECIALTIES

2,000 Sq. Ft. of Beautifully Furnished & Appointed
Office Space on Nicely Landscaped 8,000 Sq. Ft. Lot

ZONED FOR 5 DOCTORS

PLENTY OF ON AND OFF STREET PARKING

10 Minutes from East Side of Providence

Owner Box 871, Journal Office

RHODE ISLAND MEDICAL JOURNAL

| | |
|---|-----|
| DELIVERY OF HEALTH CARE FROM THE WASHINGTON VANTAGE POINT The Honorable Robert O. Tiernan | 407 |
| HOSPITAL COSTS: SENSE AND NONSENSE Eli Ginzberg, Ph.D. | 409 |
| JEJUNAL DIVERTICULOSIS Seebert J. Goldowsky, M.D. and Ezra Sharp, M.D. | 413 |
| RELATIONSHIPS AND RESPONSIBILITIES BETWEEN HOSPITALS AND PHYSICIANS Banice M. Webber, M.D. | 417 |
| HAMARTOMATOUS CYST OF THE LIVER J. Merrill Gibson, Jr., M.D. | 420 |
| MASTERS IN MEDICINE THE SEVENTY-FIFTH ANNIVERSARY OF FRANCIS HENRY WILLIAMS' CLINICAL APPLICATION OF THE X-RAY Murray Watnick, M.D. | 422 |
| EDITORIALS | 424 |
| BOOK REVIEW | 421 |
| DERMAQUIZ | 426 |
| PERIPATETICS | 404 |
| REPORT OF THE AMA ANNUAL MEETING | 393 |
| REQUIREMENTS UNDER THE NEW FEDERAL NARCOTICS REGULATIONS | 402 |

COVER: The 12-story Ambulatory Patient Center currently under construction at Rhode Island Hospital will furnish modern facilities for the many outpatient clinics at the hospital. A few beds will be available for patients requiring diagnostic and treatment services up to 24 hours. Shepley, Bulfinch, Richardson and Abbott — architects. The Gilbane Construction Company — contractors.

The Center is scheduled for completion in late 1972.

Construction costs of health care facilities represent a significant proportion of overall health care costs.

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

American Medical Association Annual Meeting

Summary Report Of Actions Of House Of Delegates At The 120th Meeting Held At Atlantic City, N.J., June 20-24, 1971

Edmund T. Hackman, M.D.,
Rhode Island Delegate

Seebert J. Goldowsky, M.D.
Rhode Island Alternate Delegate

The 120th annual meeting of the AMA at Atlantic City certainly had as its highlight the appearance before the House of Delegates and their guests of the President of the United States, Richard M. Nixon. His address to the delegates was a challenging one which was readily accepted by the AMA, as was evidenced by full page newspaper ads in major newspapers of the country the following day pointing out that America's physicians accept the challenge to provide more and better medical care for all the citizens of the nation.

Rhode Islanders had a more active part than usual in the meeting. Doctor Hackman, delegate from the R. I. Medical Society, was a member of the References Committee to which was directed the bulk of the resolutions and reports, many of a controversial nature. Dr. Ciro Scotti, West Warwick physician, was the first official delegate to the AMA meetings from the Vatican. Mrs. John J. Cunningham addressed the Woman's Auxiliary on the work of the Rhode Island unit during the past year, and Mrs. Thomas Egan was named a member of the national Auxiliary's council for a two year term.

HIGHLIGHTS OF PRESIDENT NIXON'S ADDRESS

President Nixon began with some general statements based on Disraeli's comment that "The health of the people is really the foundation upon

which all their happiness and all their powers as a state depend," pointing out that "I am happy for this opportunity to salute this profession which has contributed so much to the health of the American people and to the strength of this nation."

He talked about the current debate on national health insurance, emphasizing that "I believe that the most expensive plan that has been offered — a plan for nationalized, compulsory health insurance — is the plan that would actually do the most to hurt health care in this nation."

Such a plan, the president said, "would exact a very high price from our people in terms of dollars and cents. But it would exact an even higher price in terms of the quality of American medicine."

Mr. Nixon emphasized that America's health care system needs reform. But he added that "We can never improve our country's medical system by working against our country's medical profession. No system of health care will ever work unless the doctors of the nation make it work. So let us work together," he said, "for a system — that will continue to provide for choice, that will continue to provide for quality and one that will at the same time deal with the pressing problems of costs in an effective way that will not destroy quality."

(Continued on Page 397)

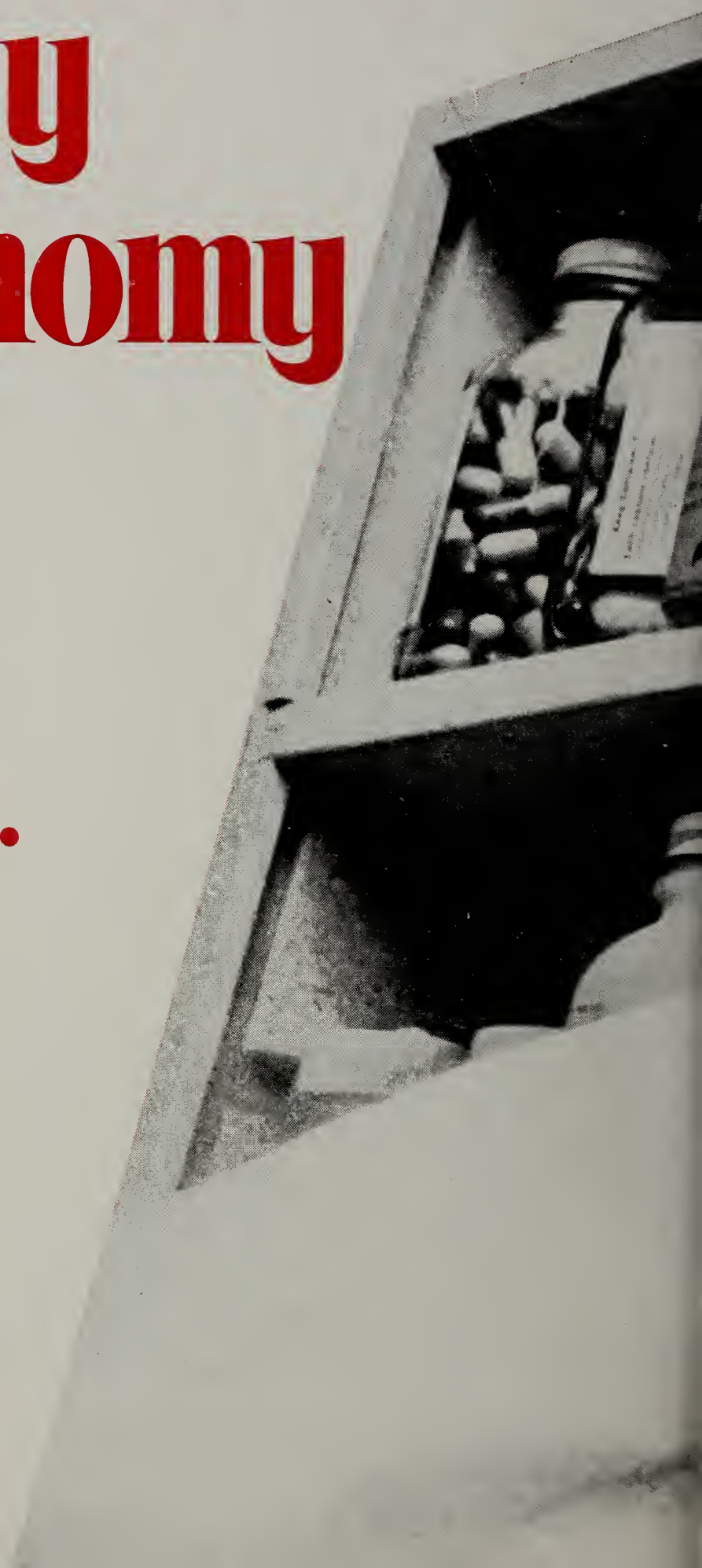
Guide his hand to quality and economy

Specify
Deltasone® 5 mg.
(prednisone, Upjohn)

an economical
prednisone
that's made
a name for itself

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001



AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

(Continued From Page 393)

The bulk of the president's 34-minute talk, which was punctuated several times by applause, was a challenge to America's physicians to assume leadership in curing and preventing drug abuse. That problem, he said, "is America's public enemy number one. It afflicts the rich and the poor, the blacks and the whites, the servicemen and the civilians, and the ghettos and the suburbs. It spreads like a plague throughout our society. "It erodes our nation's strength. It destroys our nation's spirit. And worst of all, it undermines our nation's future.

"The best way to end drug abuse is to prevent it, and America's doctors are the indispensable front-line soldiers for success in this all-important battle. No one, believe me, no one can have more effect when he or she speaks out than a doctor on this issue of drug abuse. You speak with greater authority, because you speak about the power of drugs to save life — but also the power to destroy it.

"Rather than preach moralistically about the sinfulness of drugs, you can teach realistically about their physical and psychological impact."

The president finished this major portion of his speech by saying, "The AMA can once again render outstanding service at a point of critical need by helping to develop what I would like to call Project USA — a project which would marshal the tremendous energy, the brains, the dynamism, the leadership — the leadership — of the doctors of this country in an all-out battle against drug abuse."

After some remarks about the need for physicians to be more active in politics and community leadership, President Nixon closed with these words: "The health of America is in your hands, and by its health I speak not just of its physical health — but its mental health, its moral health, its character. Meet that challenge."

Dr. Wesley Hall of Reno, Nevada, was installed as the new President, and Dr. Carl Hoffman, of West Virginia, defeated Dr. Claude Welch of Boston in the race for the position of President-Elect. Dr. Ralph Teall of California, was elected Vice President.

Doctor Hall, in his inaugural address, listed major changes made in the past years by the AMA,

(Continued on Next Page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

559-9

Hopkins

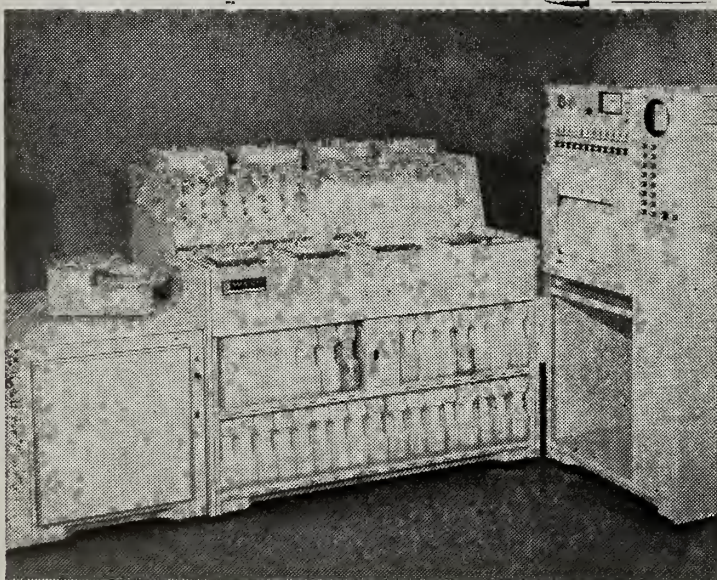
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLUCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

**ALL 20 PROCEDURES
\$15.00**



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO DONALD MATTERA
Ph. D. B.S. M.T. (ASCP)

but pointed out that "This year, one or two changes will not be enough."

Some of his suggestions were "at least one additional meeting day" for the House to conduct its business; re-examination of "the aims and duties of our 100-plus councils, committees and commissions;" moving "through out state organizations to bring a greater number of young, able and productive physicians into our Association;" setting "a limit upon the number of terms delegates can serve in this House;" and rescinding "a number of outdated and long-ignored resolutions (that) remain on our books as policy statements."

Doctor Hall urged the Woman's Auxiliary to undertake new and increased activities in "encouraging prenatal care for the expectant mother, especially in rural areas and in areas where low-income families are concentrated;" and in "helping to combat problems of teenage drug abuse and addiction."

Referring to the fact that some physicians are critical of the AMA, Doctor Hall emphasized that the goal of the AMA and the goal of these colleagues is the same: to provide the best possible health care for each and every American, at reasonable cost.

"I urge all physicians — those in practice, those in government, those in research and teaching, those in public health, those in administrative positions, those in all facets of medical activity — to come under the AMA's umbrella, to bring to us their hopes, their beliefs, their ideas and their vigor."

In closing his inaugural address, President Hall said, "The basic needs of man are food, clothing, shelter, education and health. Certainly physicians have some expertise in each of these areas. We know the requisites of good nutrition; we are able to give advice concerning the health aspects of clothing and shelter; we can contribute to education; we care for the sick, and we attempt to keep the healthy in that enviable condition."

ACTION ON DRUGS AND DRUG ABUSE

In addition to the action taken in direct response to President Nixon's speech to the House, delegates also took several other actions on the subject of drugs and drug abuse.

A report of the Council on Mental Health and its Committee on Alcoholism and Drug Dependence was filed for the information of the Association. It contains these recommendations for the

(Continued on Page 400)

The get-up-and-go summer cold and allergy pill.

Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine[®]
LP decongestant



THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN
Model 423**

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS**

HOME TRACTION

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

(Continued From Page 398)

medical profession:

1. Increased attention to alcoholism and drug abuse in the curriculum of medical schools.
2. Medical students, interns and residents should be encouraged to associate themselves with "street clinics" to establish links between the profession and young drug abusers.
3. Continued development and dissemination of reliable information to physicians and other health professionals.
4. Laws and regulations should be modified to recognize alcoholism and drug dependence as illnesses.
5. Closer liaison between medical societies and law enforcement and licensure bodies to deal jointly with the problem of physicians suspected of professionally misusing or personally abusing drugs.

6. Continually up-dated factual material for public consumption.

7. Increased emphasis on the responsible use of drugs for therapeutic purposes, both by the public and by physicians.

The House resolved to follow "studies being conducted to ascertain the relationship between proprietary drug advertising in the mass media and excessive use of self-prescribed drugs and drug dependence problems" and to "cooperate in every way possible in the studies being conducted by the FTC to assure the enactment of proprietary drug advertising regulations in the interests of protecting consumers."

Delegates also resolved to "urge all physicians to limit their use of amphetamines and other stimulant drugs to specific, well-recognized medical indications."

In addition, the House resolved to go on record "favoring the implementation of stern measures for narcotic traffic control in Vietnam, as well as measures for the identification, prevention, diagnosis, and adequate treatment of addicts within the armed forces, with adequate provision for the availability of proper follow-up and aftercare."

TERMINOLOGY AND DEFINITIONS

Concerned with the growing use of the term "physician's associate" as opposed to the term "physician's assistant" to describe new health occupations, the Board and its Council on Health

(Continued on Page 401)

AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

(Continued From Page 400)

Manpower recommended (and the House agreed) that the term "physicians associate" be used only to denote another physician.

The House resolved that future editions of the publication AMA Drug Evaluations "avoid the use of the word 'irrational.'"

Delegates adopted three definitions in the area of peer review:

"Peer Review: Evaluation by practicing physicians of the quality and efficiency of services ordered or performed by other practicing physicians. Peer review is the all-inclusive term for medical review efforts. Medical practice analysis; inpatient hospital and extended care facility utilization review; medical audit; ambulatory care review; and claims review are all aspects of peer review.

"Medical Practice Analysis: A function of the medical society, or other organization authorized by the medical society, designed to coordinate all peer review efforts of a community. Medical practice analysis focuses on the development and application of criteria for optimal medical care, and evaluates the individual and collective quality, volume, and cost of medical care, wherever provided.

"Claims Review: Peer evaluation and adjudication of claims questions referred for peer review by any party with a valid interest in the case."

Definitions of other elements named in the "Peer Review" definition itself were referred back to the Council on Medical Service for further refinement.

PEER REVIEW

Further in connection with peer review, the House resolved:

"That the American Medical Association and its constituent state associations reaffirm their support of voluntary mechanisms of review and education by physicians such as grievance committees, insurance review committees, and the numerous hospital review mechanisms, many of long standing;

"That the AMA and its constituent state associations continue to stress that peer review shall be considered a professional function, and as such shall be carried out by physicians or under the sponsorship of the county and state medical societies;

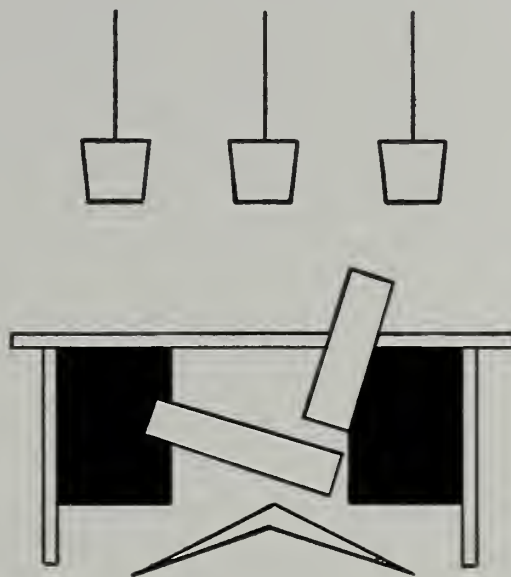
"That this House of Delegates call on all state and county medical societies and the AMA to take

(Continued on Page 431)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

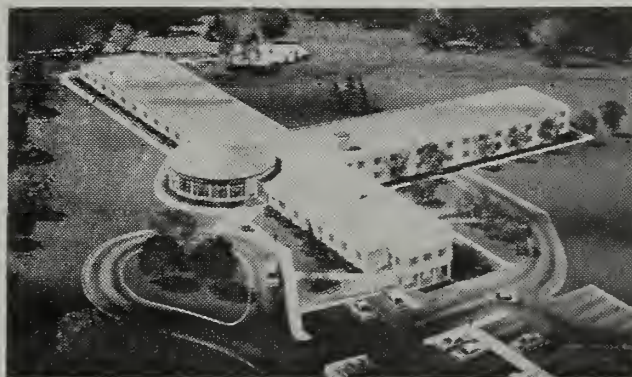
36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

Requirements Under The New Federal Narcotics Regulations

To The Members of the R. I. Medical Society:

The inventory and recordkeeping requirements under the Controlled Substances Act of 1970 as they relate to physicians are listed for your information.

Sections 304.12, 304.13 and 304.17 of the Regulations Implementing the Controlled Substances Act of 1970 outlines the general and specific requirements for inventories as they apply to physicians. All handlers of controlled substances who are required to maintain records were required to take a complete inventory on May 1, 1971 and to keep this signed, dated document at the registered location for two years. There is no requirement to forward the inventory to the Bureau of Narcotics and Dangerous Drugs. The Bureau in conjunction with certain associations did prepare an inventory form for use by distributors, hospital and retail pharmacies; however, this form was also to be maintained at the registered location. The purpose of providing a prepared inventory form to these selected registrants was to aid the group

of registrants who have the widest variety of controlled substances.

The requirement for taking inventories is related to whether or not the registrant is required to keep records. A registered individual practitioner is not required to keep records with respect to narcotic controlled substances listed in Schedules II through V which he prescribes or administers in the lawful course of his professional practice. The physician is required to keep records, including inventories, receiving records, and dispensing records, for any narcotic substances in Schedules II through V which he dispenses other than by prescribing or administering. This includes both narcotic physician's samples and narcotic substances purchased by the physician. At the time the inventory is taken, the physician may not know whether the narcotic physician's samples will be utilized by administering or dispensing. As a general guideline, in this situation, oral dosage forms will be considered to be intended for dispensing and parenterals for administration. Therefore, unless the physician intends to dispense parenterals, he need only inventory the oral dosage form of narcotic samples.

A registered individual physician is not required to keep records (including inventories) with respect to non-narcotic controlled substances (including samples) listed in Schedules II through V which he dispenses in any manner unless he regularly charges his patients either separately or together with charges for other professional services, for such substances dispensed (i. e., when he substitutes his services for those of a pharmacist). If the physician is regularly engaged in dispensing as described, he must maintain complete and accurate records of all samples dispensed as well as drugs which he has purchased and dispensed.

I hope this information clarifies the requirements for inventories and recordkeeping for physicians.

Sincerely,
Larry Kerness, Acting Chief
Compliance Investigations Division
Bureau of Narcotics and Dangerous
Drugs
United States Department of Justice

⌘ ⌘ ⌘

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a **special message.**

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, **now**, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

**215 WATERMAN AVE.
East Providence, R. I. 02914
Phone (401) 438-0660**



Picture of low back pain

Parafon Forte tablets help to relieve pain,
restore mobility... stop pain-spasm feedback

...this is why. PARAFON FORTE provides:

Salicylate analgesic equal to aspirin for relief of pain,^{1,2} yet unlikely to cause the gastric irritation^{2,3} or increased bleeding time⁴ associated with aspirin therapy.

Skeletal muscle relaxant shown in extensive clinical studies to be useful in a variety of low back disorders⁵⁻⁷ at which is not an antihistamine or tranquilizer derivative and is unlikely to produce a tranquilizing or sedative effect.⁸

Prescribe PARAFON FORTE for effective spasmolysis and analgesia in acute sprains, strains and myalgias of the low back, including acute exacerbations of chronic conditions. Your patients will appreciate the restored comfort and freedom of movement it usually provides.

McNEIL

McNEIL LABORATORIES, INC., FT. WASHINGTON, PA. 19034

treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

Contraindications: Sensitivity to either component. **Warnings:** *Usage in Pregnancy*—Use in woman of child-bearing potential only when potential benefits outweigh possible risks. **Precautions:** Exercise caution in patients with known allergies or history of drug allergies. If a sensitivity reaction or signs or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. **Adverse Reactions:** Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely, allergic-type skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions. In rare instances, *Paraflex* (chlorzoxazone) may possibly have been associated with gastrointestinal bleeding. While *Paraflex* (chlorzoxazone) and chlorzoxazone-containing products have been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. **Usual Adult Dosage:** Two tablets q.i.d. **Supplied:** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: *Fed. Proc.* 14:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: *The Pharmacological Basis of Therapeutics*, ed. 4, New York, The Macmillan Company, 1970. 3. Vickers, F. N.: *Gastroint. Endosc.* 14:94, 1967. 4. Mielke, C. H., Jr., and Britten, A. F. H.: *New Engl. J. Med.* 282:1270, 1970 (Corresp.). 5. Kestler, O. C., and Gyurik, J.: *Industr. Med. Surg.* 21:372, 1962. 6. Forster, S., et al.: *Amer. J. Orthop.* 2:285, 1960. 7. Data on file, McNeil Laboratories, Inc. 8. Friend, D. G.: *Clin. Pharmacol. Ther.* 5:871, 1964.

*U.S. PATENT NO. 2,895,877

Peripatetics

ROBERT P. SARNI was installed recently as President of the Rhode Island Chapter of the American Academy of General Practice at the organization's annual dinner in Newport.

Other officers include: ALFRED A. ARCAND, President-Elect; JOSEPH L. C. RUISI, Vice President; PAUL E. BARBER, Secretary; and JEAN M. MAYNARD, Treasurer.

Installed as delegates were ROBERT P. SARNI and RAUL NODARSE; PETER C. H. ERINAKES and HENRY M. TYSZKOWSKI, alternates; and directors, F. BRUNO AGNELLI, GEORGE E. CHARON, RICHARD J. KRAEMER, CHARLES MILLARD, JOSE RAMOS and SALVATORE J. TURCO.

* * *


FRANCIS B. SARGENT was recently honored for his 50 years of medical service to the Providence Association of Medical Assistants at the 10th annual installation dinner of the organization.

Taste!

Dicarbosil[®]

ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES

319 South Fourth Street, St. Louis, Missouri 63102

HENRY S. M. UHL has been appointed to the position of Director of Professional Affairs at St. Joseph's Hospital, where he will have primary responsibility for all medical educational programs within the hospital.

* * *

The Senate adopted a resolution extending heartiest congratulations to AMERICO A. SAVASTANO on being chosen by the Verrazzano Day Committee to receive its outstanding citizen of Italian heritage award at a dinner May 23rd.

* * *

BENJAMIN F. TEFFT, the State's oldest practicing physician, celebrated his 96th birthday May 20.

* * *

BENCEL L. SCHIFF has been elected to a Fellowship of the American College of Physicians.

* * *

The following physicians were appointed to active staff at Rhode Island Hospital: KARL E. KARLSON, Surgeon and Surgeon-in-Charge of the Division of Cardiovascular Surgery and the Division of Thoracic Surgery; and JOHN R. MARCACCIO, Department of Urology.

Appointed to Consulting Staff was JOHN CRAWFORD, Department of Pediatrics.

* * *

The following physicians were elected to the Executive Committee of The Miriam Hospital: President, STANLEY SIMON; Vice President, MELVIN D. HOFFMAN; Secretary, MARTIN E. FELDER; and Treasurer, GUSTAF SWEET.

The following appointments were also made: HENRY LITCHMAN, member of the Executive Committee and the Medical Board; STANLEY D. SIMON, member of the Medical Board; and HENRY IZEMAN, member-at-large of the Executive Committee for two years.

* * *

BEN W. FEATHER, the new medical director at Butler Hospital, was the guest of honor at two receptions held recently. Doctor Feather assumed his duties as medical director at Butler Hospital on July 1.

⌘ ⌘ ⌘

Delivery Of Health Care From The Washington Vantage Point

Cautions Against Any Plan That Would Eliminate Private Health Insurers As Viable Alternatives

By The Honorable Robert O. Tiernan

For nearly 30 years, legislation has been introduced into the United States Congress calling for the enactment of a national health insurance program for all Americans.

During the Roosevelt Administration of the 1930's there was an unsuccessful attempt to include compulsory health insurance protection as part of the new Social Security Program.

Many bills proposing various forms of national health insurance have been introduced into Congress since that time.

MURRAY-WAGNER-DINGELL PROPOSALS

Of these many proposals, the one that has come the closest to providing for the establishment of a compulsory health insurance program for all citizens is embodied in the Murray-Wagner-Dingell bills named after their principal sponsors. This proposal was first introduced in 1943, and versions of it have been introduced into each succeeding Congress.

President Harry S. Truman urged the enactment of a national health insurance program such as the one contained in the Murray-Wagner-Dingell bills in three separate messages to Congress in 1945, 1947, and 1949.

ROBERT O. TIERNAN, *United States Representative from the 2nd Congressional District of Rhode Island.*

Presented at the Annual Meeting of the Rhode Island Chapter, American College of Surgeons, Newport, Rhode Island, May 14, 1971.

Extensive hearings were held on these and other bills in the Senate, the House, or both in the years 1946-49. But the establishment of a national health insurance program received no further Congressional action.

The Murray-Wagner-Dingell bills were omnibus proposals, containing other programs in addition to health insurance, such as loans and grants for health facilities and assistance for training health personnel.

Various sections of these earlier bills have been incorporated into health legislation enacted in the 1950's and 1960's.

Since the late 1950's, proponents of national health insurance concentrated their attention on the Medicare for the aged legislation, which was finally enacted in 1965.

Now, in a context of rising medical and hospital costs and questions about our health services delivery system, a renewed effort on behalf of Federal legislation for a national health insurance program has been gaining momentum in Congress.

A flurry of proposals for a national health insurance program has been introduced into the 92nd Congress.

No citizen would dispute the ultimate goal of sufficient health services for all Americans, and the variety of programs proposed indicates that representatives of all political positions recognize the need for a governmental spur to achieve that end.

(Continued on Next Page)

I should like to review the legislation that has been submitted and to offer my own thoughts on a question that is of vital importance for those people, like yourselves, who are entrusted with the primary responsibility for meeting the health needs of our vast and complex population.

NIXON PROPOSAL

The Nixon Administration's position on health insurance is not quite clear. Its Senate bill would require a \$5.5 billion Federal government outlay and far larger, but still unestimated contributions from employers and workers. Those families with incomes in excess of \$5,000 could buy coverage from private health insurance companies under National Health Insurance Standards Plan guidelines.

Emphasis would be placed on providing service through group-practice plans, and employers would eventually furnish up to 75 per cent of the cost of coverage with employees contributing roughly 25 per cent. Families with incomes below \$5,000 would pay a minimal or no fee for coverage under the proposed Family Health Insurance Plan.

Medicaid would be continued for the aged-poor, the blind, and the disabled; Medicare would be maintained for persons over 65.

The confusion that surrounds the Administration's legislation was created when the Nixon House bill was introduced with provision for tax credits and Federal subsidies for individuals employing 10 or fewer persons.

Apparently the House Republican leadership fears that the Senate bill's provisions for employer contributions would encourage employers to lay off many marginally employed workers rather than buy health insurance for all their employees.

KENNEDY-GRIFFITHS PROPOSAL

A plan much more comprehensive in scope has been proposed by Senator Edward M. Kennedy and Representative Martha W. Griffiths. It is supported by organized labor. Financed in part from general revenues and in part from Social Security payroll taxes, it would offer complete coverage to all Americans.

This measure could cost from 44 to 77 billion dollars. To fund this program, the payroll-tax base would rise to \$15,000 with workers paying one per cent, employers 3.5 per cent, and self-employed persons 2.5 per cent of their income.

A Federal Health Security Board created by the legislation would set standard charges and prepay bills, with the performance of health service per-

sonnel being checked by professional panels. Like the Administration plan, the Kennedy-Griffiths proposal would promote group-practice arrangements.

Unlike the Nixon plan it would cover almost all the costs of doctors fees and hospital expenses, as well as the costs of drugs and certain additional incidentals.

MEDICREDIT

Two other plans, somewhat similar in character, are the AMA's "Medicredit" Plan and the Health Insurance Association of America's Plan. The voluntary "Medicredit" Plan is so-called because it includes income tax credits for costs of private health insurance with the credits decreasing as a person's income tax rises. It would also provide coverage for catastrophic illnesses.

The poor who pay no income tax would get free certificates from the government to pay for health insurance, and the aged would continue to be covered by Medicare. Cost estimates range from 8 to 15 billion dollars—a much more reasonable outlay.

NATIONAL HEALTH CARE ACT

The National Health Care Act, endorsed by the major companies selling private health insurance, would also offer income tax credits for purchase of health insurance in programs having Government approval.

Medicare would continue to provide for those over 65, while Medicaid would be abolished. Those presently eligible for Medicaid would have their health-insurance costs borne by Federal and State funds.

The Federal Government outlay would initially require an estimated 3.4 billion dollars from general revenues and Social Security payments with the States' share of the financing as yet undetermined.

JAVITS PLAN

The Javits Plan, officially labeled the "National Health Insurance and Health Services Improvement Plan," would eventually cover everybody. It would build upon the Medicare system of financing health services through Social Security payroll taxes, with the Government, employers, and workers each paying a part and the payroll-tax base increased to a maximum of \$15,000 a year.

Private insurers would remain as third party agents for the Government with the Department of Health, Education, and Welfare the primary supervisory power. The cost of this plan would ultimately reach the Kennedy-Griffiths range, perhaps 66 to 68 billion dollars by the fifth year.

(Continued on Page 427)

Hospital Costs: Sense And Nonsense

"The only chance of moderating the (costs) increases that lie ahead is for third parties to design and exercise controls so that the producer cannot continue to charge whatever he wants to charge. For this . . . we need pre-expenditure controls."

By Eli Ginzberg, Ph.D

Let me begin by sharing with you a few generalizations based on experience in the military.

Long before Roemer formulated his law in the 1950's that whenever beds are available they tend to be used, we knew the truth of this formulation.

Eli Ginzberg, Ph.D., Chief Logistical Advisor to the Surgeon General of the Army in World War II, was responsible for matching manpower, facilities and patients in a system that had 625,000 patients in bed in one day.

Dr. Ginzberg is A. Barton Hepburn Professor of Economics and Director, Staff Studies, National Resources Project, Columbia University. From 1951 to 1960 he served as director, staff studies, National Manpower Council. He is Chairman of the National Manpower Advisory Committee.

Last February, Dr. Ginzberg addressed the Association for Hospital Medical Education on the subject of "Hospital Costs Sense and Nonsense." The article is a slightly abridged text of his paper.

Reprinted from the January, 1971 issue of **Viewpoint** with the permission of the author and publisher.

Another lesson that I never forgot was that the only check to excessive hospitalization and over-doctoring was to keep very tight control over capacity and to make sure that patients requiring specialized attention were treated in institutions which had the specialized staff.

These are lessons I learned so well that I have never forgotten them and they still stand me in good stead when I reflect upon present circumstances and more particularly upon proposals for reform.

THE NATURE OF A HOSPITAL

Before considering specifically the factors influencing costs, let me put before you a few basic considerations about the nature of a hospital which in my opinion must be in place if we are to understand what has been happening to hospital costs and what can be done to moderate their further rise.

A hospital is a multipurpose institution. Very briefly it:

- ▲Provides the locus for more complicated levels of medical care.

(Continued on Next Page)

- ▲Provides standby capacity for emergency needs.
- ▲May provide the locus for medical services to ambulatory patients as is the case with the large expansion of emergency rooms in New York City hospitals.

Also, a hospital is:

- ▲A major source of employment for several million workers.
- ▲The major work place for most professionals in the medical field.
- ▲A part-time work place for physicians in private practice.
- ▲A teaching and research institution.
- ▲An institution where important innovations and developments in medicine occur.
- ▲An institution which attracts the active participation of certain lay leaders.

Given these varied dimensions, it should be clear that one cannot deal in any simple minded fashion with hospital inputs or outputs. For the patient the hospital may be critical as regards his therapy. For many who work in the hospital it is a job and income. The professional may be interested in the hospital for clinical, research, or training reasons — or for all three. And a few people really see the hospital through the eyes of a manager, an administrator, or a director.

We are now ready to deal with the critical issue of hospital costs. I would like to note specifically my indebtedness to Professor Herbert Klarman whose several papers, one of which has been published by the Social Security Administration, is a source of such data as I will refer to.

Klarman pointed out that over the long run — from 1929 to 1968 — the daily service charge of general hospitals increased at a rate of approximately 6 per cent per annum. In the immediate post World War II period, the annual rate moved up to 9 per cent and in the last few years it was advancing about 15 per cent per annum. But the first point to remember is that while hospital costs have been going up very rapidly in the last few years, *they had been going up right along.*

GOVERNMENT FUNDED PROGRAMS

Let me suggest briefly some of the things that happened when more governmental funds became available to the hospital industry. Though about 60 per cent of all hospital costs represent wages and salaries, the earnings of hospital personnel were still not competitive with other sectors in the society. Hence, labor got a substantial slice of the new money.

To concretize this point, ten years ago a major

teaching hospital in New York paid its residents very little and its interns even less. Today it must budget over \$3 million for these two groups.

The most serious consequences of the federal government's pumping \$6 billion annually (1970) into general hospitals is that hospital administrators who had always been concerned about deficits suddenly decided that they were on easy street and did not have to worry about money anymore. They began to approve all kinds of requests for expensive equipment, services, and the like. Since they could be reimbursed for all of the costs, and initially earn a few per cent above that, all constraints were removed.

I have just read the testimony before a state legislative committee of a leading hospital administrator in New York City who boasted of the fact that whenever they discover that a newly admitted patient has high blood pressure they automatically submit him to a series of tests which cost \$700. I submit that that is bad medicine and impossible economics.

Let me give you another illustration of what taking off the financial lid implied. In the three years 1965-68, the full-time faculty in medical schools increased from 17,000 to 22,000. One need not be accused of being in opposition to full-time faculty, which of course I am not, to say that such an increase in such a short period of time represents expenditures gone wild.

Beyond the unsettlement that followed from the new federal funds let me emphasize that hospital care permits relatively little substitution of machinery for men, which means that the gains in productivity will at best be modest. One cannot compare hospital care with automotive production.

But even within the inherent difficulties of securing productivity gains in the hospital care industry, one can do things better or worse. It is well known and admitted by all who have studied the problem that established insurance policies encouraging people to be treated in hospitals are seriously inflationary. The insurance companies are to be reprimanded for having been so slow in experimenting with ways of providing costly services to patients on an ambulatory basis.

But let me quickly add that improved insurance and better bed utilization practice over the entire week and over the entire year will, by themselves, not contribute to a reduction in hospital costs. If one remembers Roemer's law that all beds tend to be used, there will not even be any payoff in my opinion for better professional control over admis-

sions and discharges, or any significant gains through incentive reimbursement policies unless and until tight control is exercised over the total bed complement.

A POSSIBLE APPROACH

What, then, can be done? As a beginning, the major third parties, namely government and insurance, must play much more active roles. The incestuous marriage between Blue Cross and the hospitals must be broken up. If third parties begin to protect their interests, I believe that the rise in hospital costs can be moderated. It is my understanding that in New York State, Blue Cross has placed a ceiling on the percentage increase that it will pay over the next two years.

I am not very enthusiastic about the proposals which look to influencing the professional staff in the hospitals as the principal method of cost control. I think it is the responsibility of the trustees and the directors to determine how much money they are willing to spend and I think it is unwise to ask the professional staff to take the primary responsibility to control expenditures.

THE GOVERNMENT HEALTH PROGRAM

Now I will discuss briefly what might go under the title of Ginzberg's modest agenda. By way of introduction, I am distressed in my readings of the daily press that all of the good liberals of the 1930's are now promising that a new national system of health insurance will solve all the problems that Medicare and Medicaid were supposed to solve.

My great fear is that we will again assume that new legislation, which some of its protagonists insist will cost us nothing (!), will give us all the answers which we have been unable to work out previously.

I do not contest for a moment that serious deficiencies exist in our present nonprofit and commercial insurance, but I am not able to discover how these defects are supposed to be remedied and a lot of other ones in addition by recourse to a national system.

For years economists have been unsettled by what might be called the vulgar liberalism of the American businessman who sings the praises of the free market while engaging in all kinds of restrictive practice and in addition seeks favors from the government.

The medical reformers seem to me at least to be engaged in a similar game of assuring the public of the values of a national health insurance system without indicating how this model is sup-

posed to produce the results which they seek and the public needs.

CRITICAL FINANCING AND MANPOWER PROBLEMS

The critical point is that the nation is pushing against the ceiling of real resources. We no longer have any large number of excess workers or excess capital to play with. This is the critical issue in financing mechanisms.

The problem faces us not only with respect to medical care but also in education, urban renewal, environmental control, in fact, with respect to everything that needs doing and that we want to do. Even a rich state like California has been forced to beat a retreat in the financing of higher education, because it is no longer able to attract a sufficient number of tax dollars from the citizenry.

Having argued that altered financing will do little if anything to improve matters and that we face a serious problem in limitation of resources, let me now stress some of the critical elements that must be brought under control if we are to get a higher use out of the health dollar.

We have twenty hospitals in New York City capable of doing open-heart surgery, but two-thirds of the work load is performed in five of them. Unless we learn how to control beds and services, we will continue to have gross inefficiencies in the health system.

STRENGTHEN MAJOR MEDICAL

Secondly, with respect to the shortcomings of insurance I am in favor of improving major medical which, in my opinion, with its sizable deductible is what most of middle-class America needs and wants. Since I do not believe that we can guarantee a high level of medical care for the entire American public I want to be careful about how to improve the present imperfect structure.

One way, as I have just suggested, is to strengthen major medical insurance.

The other is to work out some special approaches to the urban and rural poor so that they can gain more access than they now have to the system. In the cities I would try to link them to the major teaching hospitals. In the countryside I would stress public health nursing and improved transportation to urban hospitals.

With respect to such a critical matter as utilization, I have been distressed for a long time at the differential in average patient stay of between 30 and 40 per cent between hospitals on the East

(Continued on Next Page)

Coast and West Coast. It would seem to me that if third parties were doing their job, hospital administrators and their professional staffs would be on the spot trying to justify the persistence of so large a differential; and if they could not justify it, perhaps we could get some improved utilization.

As an economist I am interested in resources, quantities, and allocations, but I am also concerned about quality. It seems to me that we have done much less than we should and can do in utilizing statistical reporting systems as an instrument of quality control. The state or some other representative body has a reason to look into hospitals that have a hysterectomy rate twice and three times above the average.

But to return to my own area. I am pretty well convinced that if hospital costs are not to go totally out of control, third parties must stipulate ahead of time the outer limits of reimbursement. That means that a large Blue Cross system should announce that it will not honor any claims that are more than 8 per cent above last year's figure.

It may be possible that in addition to this type of budgetary constraint in advance, one might be able to work in some incentive payment for hospitals whose cost increases are far below the average.

The country has been on a financial binge these last few years. The medical profession must acknowledge, if it is honest with itself, that there are many reprehensible practices that developed once physicians decided that the government would reimburse them for services rendered. All too many have been submitting bills for putting their heads into a patient's room and calling it a visit.

MORE EXPERIMENTATION NEEDED

Included in my modest agenda would be more experimentation. I would like to see the New York State law changed to permit a corporation to practice medicine for profit. We might discover that a good administrator with a full-time professional staff could rationalize his operations to a point where he could provide a good quality of care at a price considerably below the average, even after taking into consideration that his hospital might not be engaged in teaching or research.

A few concluding observations. In 1940, the per diem hospital cost in New York City was \$7. In 1955, it was approximately \$30. In 1968, it averaged about \$110. Clearly, hospital costs have been rising over a long period and I see no prospect for them to do anything else but to continue to rise.

The critical question, however, is at what rate.

What Medicare and Medicaid did was to increase by an order of magnitude the proportion of patients in general hospitals whose care was reimbursed by third parties. Hence, the only chance of moderating the increases that lie ahead is for third parties to design and exercise controls so that the producer cannot continue to charge whatever he wants to charge. For this, as I indicated, we need pre-expenditure controls.

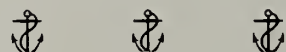
ESTABLISH CONTROLS AND NORMS

Next, I suggest that we need control over beds and services and norms about patient stays. Until we establish controls and make use of norms, we will be wasting a significant amount of the health dollar. In my opinion, chasing the chimera of national health insurance will simply inflate the cost structure further.

I have heard a lot about the need to improve management and to have directors play a larger role in controlling hospital costs. As a professor in a graduate school of business, I cannot be opposed to improved management, but the key to the story is not at the micro level but as I have suggested earlier, at the macro level.

Finally, let us face up to the fact that we have never had, we do not now have, and we will never have enough money to practice the best type of medicine that we are capable of practicing for all the people of the country. We live in a world of limited resources and the public in the last analysis must decide through the legislature, through insurance, and through direct payments how much of its total budget it is willing to allocate to health.

The decisions about health are now directly in the political arena. But it behooves all of us to remember that politics like the market is a potential but limited instrument and that it is no more capable of creating bricks without straw than is the private entrepreneur.



FOR SALE or LEASE
Attn. Physicians & Dentists
OF ALL SUBSPECIALTIES

2,000 Sq. Ft. of Beautifully Furnished & Appointed
Office Space on Nicely Landscaped 8,000 Sq. Ft. Lot

ZONED FOR 5 DOCTORS

PLENTY OF ON AND OFF STREET PARKING

10 Minutes from East Side of Providence

Owner Box 871, Journal Office

Jejunal Diverticulosis

Abnormality, Which May Mimic Diverse Metabolic Disorders, Is Cause Of Obscure Anemia And Hypoproteinemia

By Seebert J. Goldowsky, M.D. and
Ezra Sharp, M.D.

While diverticulosis of the small bowel is often asymptomatic, it has been recognized with increasing frequency as a cause of symptoms and disability. Acute and chronic obstruction, inflammation, perforation, peritonitis, and fistula formation have all been reported. Acute massive and chronic bleeding are most commonly encountered and are the most dramatic. Metabolic deficiencies, while much less common, have been reported for many years, and should suggest a search for the lesion where no ready cause is found. Diverticula may occur at any level of the small bowel, although they are much more common in the duodenum and jejunum than in the ileum. They occur characteristically on the mesenteric border.

CASE REPORT

A 67-year-old female was admitted to The Miriam Hospital on July 1, 1968 with a story of having had a tarry stool about three weeks prior to admission. About one week prior to admission she had noticed smelling of her lower extremities. Aside from feeling poorly generally, she had no

SEEBERT J. GOLDOWSKY, M.D., of *Providence, Rhode Island*; *Editor-in-Chief of the RHODE ISLAND MEDICAL JOURNAL*; *Consultant in Surgery, The Miriam and Rhode Island Hospitals.*

EZRA SHARP, M.D., of *Providence, Rhode Island*; *Consultant in Medicine, The Miriam and Rhode Island Hospitals.*

specific complaints. There had been no vomiting or other gastrointestinal or abdominal complaints. Two days prior to admission her hemoglobin level had been 10 grams per cent, and a stool was slightly positive for occult blood.

Physical examination revealed patient to be alert, but noticeably pallid. There was a 2 plus edema of the ankles and pretibial areas. Abdomen was slightly distended with a suggestion of slight ascites. Liver was not palpable. There were moderate external hemorrhoids. Joint changes consistent with a mild inactive rheumatoid arthritis were noted. Rectal examination was negative.

Hemoglobin on the day of admission was 7.9 gm per cent and hematocrit 26 per cent. Blood smear and differential white blood count were normal. Urine was clear with a specific gravity up to 1.023. Blood urea nitrogen and blood sugar were normal. Serum electrolytes, calcium and phosphorus, and liver function tests were all normal. Total serum protein on the first determination was 3.4 gm per cent with an albumin/globulin ratio of 1.9/1.5. Subsequent protein determinations showed levels as low as 3.0 gm per cent and a ratio of 1.5/1.5. A gastrointestinal x-ray series showed uncomplicated duodenal diverticula (Fig. 1), but was otherwise considered negative. Gall bladder x-ray studies were negative. A barium enema showed some sigmoid diverticula.

(Continued on Next Page)

Figure 1



Gastrointestinal x-ray study. Shows duodenal diverticula.

Patient's stools showed occult blood in varying amounts, usually fluctuating between 2 plus and 4 plus. There was no gross bleeding. Prior to surgery patient received 16 units of blood over a period of 53 days, yet during most of this period showed some degree of anemia. For example, on July 10 her hemoglobin was 9.4 gm per cent, although at that time she had received 9 units of blood since admission.

The combination of blood loss and low serum protein led to extensive investigation. Repeat gastrointestinal x-ray series, including small bowel studies, was reported as follows: "A repeat GI and small bowel series failed to reveal any evidence of gastric, duodenal, or intestinal abnormality. In reviewing these studies, while optimal views of the lower esophagus are not at hand, sufficient mucosal pattern can be seen. It is felt to rule out radiographically the presence of varices."

Gastric analysis showed normal amounts of free acid and no bleeding. Two gastroscopies revealed hypertrophic gastritis. It was considered not to be consistent with Menétrier's disease (hypertrophic gastritis) which had been suggested clinically. Multiple biopsies showed "marked chronic and slight acute gastritis". Biopsy of the ileum showed slight chronic inflammation. Sigmoidoscopy revealed normal findings. Needle biopsy of the liver was within normal limits.

Serum protein electrophoresis on two occasions showed albumin of 46.2 and 50 per cent against a normal of 60-70 per cent. Other electrophoretic findings were not significant. L.E. (lupus erythematosus) cell preparation was negative. Bleeding, clotting, and prothrombin times were normal. Blood iodine studies (protein bound iodine, total iodine, and T-3 uptake) were within normal limits. Three electrocardiograms showed non-specific findings not considered significant.

Protein losing enteropathy was considered as a possible diagnosis. Stool excretion of Cr^{51} tagged albumin was less than one per cent over four days, which was quite normal. The gastroenterologist reported: "If this test is valid, then the reason for her low albumin is not clear." Fecal fat was normal. Immunodiffusion studies gave results which were not considered significant. Bone marrow studies showed only increased erythropoiesis. Blood smears were consistently unremarkable except on one occasion when a moderately increased reticulocyte count (1.4 per cent) was noted. Anti-streptolysin titre was within normal limits. Rheumatoid arthritis latex agglutination was reactive in a dilution of 1:20, consistent with her known rheumatoid condition. Fluorescent anti-nuclear antibody studies were negative. Based on these frustratingly negative studies, it was concluded that patient was probably bleeding either from the stomach or from the duodenal diverticula. The persistently low serum protein could not be explained. Surgery was eventually decided upon. The possibility of resecting the duodenal diverticula, or partially resecting the stomach, or both were considered with a final decision to be made at abdominal exploration. Patient was given salt free albumin daily for a week before surgery and blood sufficient to bring her blood to a level safe for surgery. The risk of wound disruption due to the low protein was considered to be substantial. On the day of surgery hemoglobin was brought to a level of 11.7 gm per cent, with a hematocrit of 37 per cent. On the day prior to surgery total serum protein was 4.2 gm per cent, with an albumin-globulin ratio of 2.0/2.2.

Operation: On July 24, the 54th hospital day, abdominal exploration was carried out through a bilateral subcostal incision. The gall bladder was small and thin-walled, and contained no stones. The liver appeared to be within normal limits. The stomach and duodenum presented no pathological findings. The cecum appeared to be slightly blueish, suggesting some contained blood. While at-

tempting to visualize the left upper colon, loops of distended, reddened, thickened, and injected jejunum extruded from the left gutter appearing to have been impacted there. These loops of bowel showed streaks of white dilated lacteals. The dilation extended distalward from the ligament of Treitz for some two to three feet after which the dilation ceased abruptly and the small bowel appeared normal. There was, however, no sharp point of constriction. In the midst of the dilated portion of jejunum beginning about one foot below the ligament of Treitz were three large diverticula extending into the mesenteric border of the bowel. Two or three other small diverticula were noted above and below this area. The remainder of the small bowel was normal. The duodenum was kocherized in order to inspect its posterior aspect. The diverticula known to be present were not visualized. Careful examination of all other organs revealed no further pathological findings. A routine resection of the involved jejunum and end-to-end reconstruction were carried out. At the conclusion of the anastomosis the proximal bowel remained somewhat thickened; but its color returned to normal, and peristalsis was visible both above and below the anastomosis. Although the exact nature of the obstructing mechanism in the left upper quadrant could not be determined, it appeared to be due to a partial volvulus of the jejunum based upon one of the diverticula. There were no adhesions.

Postoperative course: The patient tolerated the procedure well, and convalescence was entirely uneventful. Her general condition improved markedly. The edema cleared, and there was no further evidence of blood loss. She received no blood or protein therapy after the operation. At the time of discharge on the 14th postoperative day hemoglobin was 10.8 gm and hematocrit was 35 per cent. Total serum protein was 5.8 gm per cent and albumin/globulin ratio was normal (3.4/2.4). Her general condition and sense of well-being were greatly improved.

On Jan. 20, 1969 five months after discharge from the hospital, patient appeared healthy, felt well, and was in good spirits. Hemoglobin was 14.4 gm, red cell count was 4.53 million per cm, and white blood count and differential were normal. Total serum protein was 7.2 gm and albumin/globulin ratio was 3.6/3.6. She had gained 10 pounds in weight since discharge from the hospital. At this writing, two years later, patient has remained well.

Surgical Pathology (Doctor H. Tamura): The specimen consisted of a segment of small bowel measuring 18 cm in length in the fresh state. Externally it showed considerable congestion of the serosal surface. It appeared to be dilated with an external diameter of approximately 6 cm. Although the serosal surface was generally smooth, the bowel wall gave an impression of considerable thickening. Along the mesenteric attachment three soft diverticular pouches measuring 2.5, 2.5, and 3.5 cm were noted. These were partially covered by smooth serosal membrane and mesenteric fat. Upon opening this bowel segment considerably hypertrophic mucosal folds without distortion of pattern were seen. The internal diameter after opening averaged 9 cm. The surface of these mucosal folds showed closely spaced whitish dots forming a velvety surface. The previously mentioned diverticular pouches communicated with the lumen of the bowel with small (less than 1 cm) orifices. The diverticular wall was generally thick, measuring not more than 0.3 cm. The mucosal lining was essentially similar to that of the rest of the bowel wall. The largest diverticular pouch showed apparent mucosal erosion and contained a small amount of reddish hemorrhagic fluid. (Figs 3 and 4.)

Microscope examination: Multiple sections of the diverticula revealed no ectopic gastric mucosa. The mucosal lining was somewhat distorted, but essentially similar to the remainder of the jejunal segment. The lamina propria was densely infiltrated by plasma and lymphoid cells. The muscular layers were stretched and sometimes disrupted. Relatively fresh mucosal erosions were seen. Sections taken from remainder of the jejunal wall also revealed marked inflammation involving the lamina propria. Many of the villi were somewhat enlarged and irregular in size. Considerable ectasia of lymphatic channels surrounding a somewhat fibrous core infiltrated by round cells was noted.

Diagnosis: Segment of dilated jejunum showing diverticula (3), marked chronic inflammation, and lymphangiectasia.

DISCUSSION

While gastrointestinal x-ray studies in our case were initially reported as within normal limits, jejunal diverticula were clearly evident on later review of the films. (Fig. 2.)

Gordinier and Sampson¹ in 1906 were the first to report jejunal diverticula observed at surgery. Their case presented with intestinal obstruction,

(Continued on Next Page)

Figure 2

Gastrointestinal x-ray study. PA view. Shows jejunal diverticula.

and was relieved by resection of a portion of bowel narrowed by jejunal diverticulitis. Case² in 1920 reported the first case in which diagnosis of diverticulosis of the jejunum was made by x-ray before operation and then confirmed by surgery. Baskin and Mayo³ in 1952 reported 87 cases of jejunal diverticulosis observed at the Mayo Clinic between 1943 and 1951. Thirty-seven cases had previously been reported by Benson, et al.⁴ Of Baskin and Mayo's 87 cases, 53 (60.9 per cent) presented diverticulosis as an incidental finding not producing symptoms. Twenty-five (28.7 per cent), complaining only of gaseous distension and mild abdominal discomfort, did not require resection. Only nine (10.4 per cent) had serious complications arising from the diverticula. Three patients had abdominal pain, inanition, and evidence of partial obstruction. Three patients had severe gastrointestinal hemorrhage. One had an inflammatory mass due to diverticulitis. Two had volvulus with bowel infarction. The first three cases appear to be the most closely related to ours.

While Backus⁵ does not list jejunal diverticulosis as a cause of either malabsorption syndrome or protein-losing enteropathy, he was aware of Montuschi's⁶ report of "Jejunal Insufficiency with Hypoproteinemic Edema", which he considered as an example of the blind loop syndrome.

Figure 3

Unopened specimen.

Figure 4

Opened Specimen.

Watkinson et al⁷ in 1959 reported the association of steatorrhea and megaloblastic anemia with massive jejunal diverticulosis. Resection resulted in relief of the condition. Altmeier et al⁸ in 1963, in reporting 62 cases of jejunal diverticulosis, found significant symptomatic complications in 16. These included "jejunal dyskinesia", acute obstruction, gastrointestinal hemorrhage, inflammation, perforation, chronic pneumoperitoneum, and subacute combined degeneration due to malabsorption. They found that symptoms occurred only in patients over 60 years of age. Samloff and Schenk⁹ in 1967 reported a case of "celiac disease" associated with multiple jejunal diverticulosis. Christensen¹⁰ reported two cases characterized by intermittent crampy abdominal pain, one of whom passed much flatus and four to five watery stools a day, which became increasingly foul smelling. He suggested that malabsorption was a factor in the symptoms of his cases. Miller, et al¹¹ reviewed the records of 123 cases of small bowel diverticula, other than Meckel's, and found serious complications in eight.

(Concluded on Page 430)

Relationships And Responsibilities Between Hospitals And Physicians

Physicians On Hospital Boards Would Provide Responsible Awareness Of Patient Problems

By Banice M. Webber, M.D.

In any discussion regarding the relationships and responsibilities between hospitals and their physicians it is important that we examine these in light of the enormous changes that have recently occurred in both the role and functions of the modern hospital and in the practice of medicine. The health industry is now the third largest in America. It employs over 3 million people, and accounted for more than \$67 billion in fiscal 1969-70, 7 per cent of the gross national product. This represents an increase from \$39 billion, or 5.9 per cent, only 5 years ago. We are obviously discussing a group of institutions which exert great economic and societal forces on our communities. We must also consider the many changes occurring in the traditional structure of the practice of medicine, and view the relationships of doctor and hospital with these changes in mind.

I could devote much time in examining and documenting changes which have taken place both in hospital structure and organization, and in the ways that medicine is practiced. Let it be sufficient to understand that we exist in a milieu of change and that health care is evolving into ways which

will be quite different from those with which we have been comfortably familiar.

This discussion must examine the relationships and responsibilities between doctors and hospitals in the light of the peculiar hierarchal organization of the modern American voluntary non-profit hospital. The institution has developed a tripartite structure — a board of trustees, an administration, and a medical staff. Thus, when we consider relationships and responsibilities, are we talking about those that exist between staff and the board, or staff and the administration? Or are we considering those that exist between the physician and the community that supports the institution? None of these can be clearly separated one from the other, and we must attempt to view the interrelationships that exist between all of them.

RESPONSIBILITIES

I will first consider the question of the responsibilities of physicians and hospitals. I believe that the basic responsibility of each is to quality patient care, and that even in this era of great change that this is one thing that has remained paramount. One cannot lose sight of the fact that the hospital exists in order to insure that the sick of a community receive the best possible chance

BANICE M. WEBBER, M.D., *Surgeon, The Miriam Hospital, Providence, Rhode Island*

Read before the Providence Medical Association on April 5, 1971

(Continued on Next Page)

of cure or improvement. The teaching and research facilities of the modern hospital should complement, but never dominate the prime responsibility to the patient.

Beyond the responsibility to the patient, however, the doctor and hospital do have responsibilities to each other. What are the responsibilities of the hospital to the physician? I believe that these include the assurance of a high standard of quality in all areas. The physician should be certain that he will treat his patient in a satisfactory environment with high quality assured in both the physical plant and in para-medical personnel. The hospital is also responsible for maintaining an environment which is conducive to and supports education of the staff, the house staff, and the rest of the hospital personnel. The governing board of the hospital must be responsible for the respect for and the maintenance of the professional freedom of the staff physicians. Finally, the hospital administration has the responsibility of interpreting the role and function of the staff physicians to the trustees and the community, and insuring that avenues for free interchange of ideas exist between them.

What are the responsibilities of the physician of the hospital? I believe that the most important of these is to insure proper utilization of hospital facilities. In spite of utilization committees and other devices the ultimate responsibility for proper hospital usage lies within the conscience of the individual physician. Secondly, if the institution is charged with the responsibility of guaranteeing the professional freedom of the physician, the physician is responsible for maintaining it by instituting and utilizing adequate self-regulating mechanisms, such as tissue committees, peer review, and critical evaluation of clinical activities. The physician must also accept the role of interpreting the hospital to his patients and the community. This is a difficult area. There are many problems with today's hospitals, especially as seen through patients' eyes, and no one can explain the reasons for these better than the physician.

We have thus far acknowledged the changes in the traditional structures of hospitals and in the practice of medicine, and have briefly considered the responsibilities of hospital to doctor and doctor to hospital. I should like to devote the remainder of this discussion to a consideration of only one area in the altering relationship between physician and hospital — that is the role of the physician in the management and decision making processes

of the hospital. If, as we have noted, there is a tripartite structure in the modern hospital, should the physician be represented on the hospital board?

RELATIONSHIPS

What has been the traditional relationship between physician and hospital in this regard? It is interesting to note that in 1752 Dr. Thomas Bond, one of the founders and members of the governing board of Pennsylvania Hospital the previous year, was required to resign from the board upon appointment to the medical staff. The subordinate relationship between medical staff and hospital has persisted to the present time. It has only been within the past 30-40 years that there has been any agitation to alter this relationship. Although none of the states has a law forbidding physician membership on voluntary hospital boards, such a law was passed in Canada in 1953.

The relationship between doctor and hospital has changed at an increasingly rapid rate, however, and with the increasing interdependence between doctor and hospital many reasons for physician membership on hospital boards have evolved. Not the least of these is the increasing dissatisfaction on the part of many physicians with joint committees as a reasonable method of communication between staff and board. The AHA, the AMA, and the American College of Surgeons have all issued policy statements advocating physician board membership as a reasonable method of increasing physician participation in administrative and managerial decisions within the hospital.

The major objection to physician board membership has been related to possible conflict of interest, and in fact many people in the hospital field who have objected to such membership have stated that they would not object to the membership of a physician who did not belong to the active staff.

Dr. Malcolm MacEachern, whose textbook of hospital administration is considered a classic, cited 10 reasons against physician membership on hospital boards. These were —

1. Membership on the governing board gives undue publicity to the individual physician, thereby placing him in a position which he may not have earned by his professional efficiency and favorably affecting his private practice.
2. Members of the governing board who are physicians may readily use their administrative position to promote themselves on the medical staff of the hospital.

3. Physicians appointed to the governing board are often not elected by the medical staff and therefore are not regarded by the other physicians as their chosen representative.
4. Placing a physician on the governing board not only tends to create jealousy among his confreres on the medical staff, but blights the interest of other staff members who have no connection with the governing board.
5. The physician-member of the governing board may be regarded by the medical staff as an inspector who is unduly critical of their work, his position thus becoming a barrier to cooperation between the medical staff and the governing board.
6. When the legal responsibility imposed upon a hospital trustee is considered, it is realized that a physician who is also a trustee might be subjected under certain circumstances to double jeopardy.
7. There is a tendency occasionally on the part of the medical representative to express his own personal judgment rather than the collective or group opinion of the medical staff which he represents.
8. The hospital may encounter difficulty in adopting the commendable practice of making staff appointments annually if preferred physicians are retained on the governing board.
9. A physician on the governing board may exert his authority in the employment of hospital personnel, which eventually may lead to charges of favoritism, thereby disturbing the morale of the institution.
10. Leading hospital authorities and recognized national hospital organizations believe that it is an undesirable practice to have a member of the medical staff on the governing board of a hospital.

CHANGING CONCEPTS

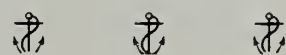
MacEachern's "decatalogue" was propounded in 1930 and has since been considered an authoritative and standard. Recently, however, these concepts have been challenged. As Kenneth Williamson, associate director of the American Hospital Association, stated in 1963: "I would imagine that the public thinks that physicians are on hospital boards. After all, they order all the services, direct the care, control the use of facilities, and are generally responsible for all the money spent.

The public assumes that the physician knows most about medical practice and patient care, as indeed he does. It seems that it would be hard, therefore, to justify his not being a major party to the policy making that affects such matters. In fact, a very fair question would be: How does the board properly decide such matters without the physician?"

Those advocating physician board membership have stated that conflict of interest would be a minor matter, since the physician board member would represent the hospital and community as a whole and neither the staff or himself. It is of interest that conflict of interest has not been considered where lay board members are involved. It is assumed that as responsible members of the community they can serve on hospital boards without seeking or granting special privileges and economic gain to themselves. Should physicians be considered less able to function in such a manner?

As the structure of hospital organization and medical practice changes, the traditional concepts of hospital staff relationships must also change. One of the dangers in the traditional triad of hierarchy is that hospital boards and even administrations will become increasingly isolated from medical thought and from the focal concern — patient care within their institutions. Communication between doctor and hospital must be improved in order to correct this. One method of accomplishing this goal would be by giving the physician an increasing voice in the management of the hospital by utilizing his talents and awareness of patient problems at the board level.

285 Governor Street
Providence, Rhode Island



OFFICE FOR RENT

Barrington; new brick building 1,000 sq. ft. carpeted ample parking; two schools within 200 yds; ideal for pediatrician or other physician.

Call George Vican
783-2400

Hamartomatous Cyst Of The Liver

Successful Removal Of Unusual Cyst Of Liver Is Reported

By J. Merrill Gibson, Jr., M.D.

The purpose of this report is to present a case of an enormous hamartomatous cyst of the liver. Hamartomatous cysts of the liver are scarce and usually reported in children¹, although a few cases are reported in adults. The large cysts usually present few symptoms, but some have caused acute surgical emergencies.² They are often multilocular, but may be solitary. These cysts may be distinguished from simple cysts by the presence of hepatic cells and bile ducts in the lining. The case to be reported represents a large hamartomatous liver cyst of bile duct origin in an adult female.

CASE REPORT

GM (107956) 6/25/63: This was the first Westerly Hospital admission of a 45-year-old white single female. A routine chest x-ray study, taken prior to admission, showed a markedly elevated right diaphragm. Her only symptoms were those of vague discomfort in the right upper quadrant. She had been a severe alcoholic for many years but had stopped drinking one and one-half years previously.

Examination: Well-developed, well-nourished white female, not jaundiced. The only significant physical signs were diminished breath signs at right base and hepatomegaly to 12 cm. below costal margin.

Laboratory: Hgb 13.7 gm, amylase, LDH, total

J. MERRILL GIBSON, JR., M.D., *Westerly, Rhode Island, Chief-of-Staff at Westerly Hospital.*

protein and A/G ratio, bilirubin, and thymol turbidity normal.

X-Ray Studies: Chest x-ray studies showed marked elevation of the right diaphragm. A barium enema showed the hepatic flexure to be markedly depressed by an enlarged liver. Gastro intestinal series showed the stomach displaced to the left by the liver.

Course: A diagnosis of hepatomegaly of unknown cause was made, and an exploratory laparotomy performed under spinal anesthesia. A right rectus incision was made. A markedly enlarged liver was immediately encountered but appeared grossly normal. A giant soft cystic area was found at the dome of the liver. A needle aspiration was carried out and a small amount of light brown fluid removed. This did not appear to be the type of fluid usually found in an echinococcus cyst but was centrifuged and examined for scolices. None were found, and, therefore the cyst was completely aspirated at 3,000 ml of fluid. This allowed more careful examination of the extent of the cyst, which was found to lie over the right lobe of the liver. A line of cleavage was found between the parietal peritoneum of the diaphragm and the cyst. A second line of cleavage was found between the liver substance and the cyst wall. This second line was less well-defined and required some sharp dissection as well.

This cyst extended well posteriorly. After removing it there was some troublesome bleeding from the extensive raw surface of the dome of the liver.

The bleeders were sutured, but the posterior surface could not be seen without extending the incision into the chest. The bleeding seemed to subside from all surfaces, and it was elected merely to drain the subphrenic space.

Large amounts of blood-tinged bile drained for the first few days. This gradually diminished over the next four weeks and then stopped. Patient was seen at various times over the next few years and had no further difficulty until November, 1967 when she had an attack of acute cholecystitis requiring cholecystectomy. At the time of cholecystectomy the sub-phrenic space was found to be obliterated, with no evidence of recurrence of the cyst. When last seen in July, 1970, she had no complaints. The liver has not been palpable since removal of the cyst.

Pathology Report: Gross description: Specimen consists of a massive collapsed partially opened cyst, measuring 19.0 x 15.0 cm. The wall is gray, fibrous, and rubbery; the wall averages 0.2 cm in thickness. There is a total of 3 loculations, 2 of which are very small. There is no evidence of daughter cysts. 2,900 ml of thin brown fluid (contents of the cyst) are received in a separate bottle. Microscopic Description: Sections through the cystic mass show a loculated cyst lined by a single layer of low columnar epithelium, resembling very closely biliary tract epithelium. Peripheral to this is some fibrous tissue containing some hemosiderin laden macrophages. There is no evidence of malignant change. A few thick walled arterioles and small arteries are noted. In some areas the lining cells are denuded and replaced with pigment laden histiocytes. In the wall focally are aggregates of biliary ducts and ductuli. Smears of the sediments and sections of the sedimented blocks show ghosts of erythrocytes and other debris. Diagnosis: Cyst, liver, huge, hamartomatous cyst of bile duct origin.

COMMENTS

The case reported represents a rather unusual case of giant hamartomatous cyst of the liver. The diagnosis was not made preoperatively. In fact, the preoperative suspicion was cirrhosis of the liver containing a hepatoma. It is quite possible that the correct diagnosis could have been made with a liver scan had this been available. The surgical removal of the cyst might have been safer and easier through a thoracabdominal approach; however, the abdominal approach was successful. Another method of handling such a large cyst is to drain it.³ This will allow the cyst to shrink but

will require resection later. It would appear that primary resection is preferable where possible.

SUMMARY

A case of an unusual huge hamartomatous cyst of the liver and its successful treatment is reported. The literature is briefly reviewed.

REFERENCES

- ¹Grimes, Moore, Nicholson and Whitehead: Cystic Hamartomas of the Liver. **British Journal of Surgery** 47:307-313, 1959.
- ²Gough S, Pike C: Cystic Hamartoma of the Liver in an Adult, Presenting an Abdominal Emergency. **British Journal of Surgery** 50:342-343, 1962.
- ³Malt RA, Hershberg RA, Miller WL: Experience With Benign Tumors of the Liver. **Surgery, Gynecology and Obstetrics** 136:285-291, Feb 1970.

7 Wells Street
Westerly, Rhode Island



Book Review

EXERCISES IN DIAGNOSTIC RADIOLOGY. Volume 1. *The Chest*, by Lucy Frank Squire, William M. Colaiace and Natalie Strutynsky. Philadelphia, W. B. Saunders Company, 1970. \$4.95.

The authors of this booklet have produced a series of practice exercises designed for teaching diagnostic chest radiology to residents in radiology, and others at the graduate level interested in this subject.

The format consists of 4-7 x-ray films of the chest, usually frontal (PA) views, being placed on a double-spread page, towards which the authors direct a series of questions to the reader.

The questions are designed to stimulate visual alertness, which combined with some clinical knowledge and lateral views on another page lead to a diagnostic conclusion. Answers are given on another page with some appropriate comments.

Because of the number of films and questions it is necessary to have a pad ever present to record one's answers.

Generally speaking the films are of good quality and the questions practical. One criticism might be that since the questions are directed to all the films on a page, one loses the concentration used in real practice where one deals with one specific case at a time.

MANUEL HORWITZ, M.D.



The Seventy-Fifth Anniversary Of Francis Henry William's Clinical Application Of The X-Ray

Pioneer Radiologist Made Many Important Contributions To Clinical Use Of New Physical Modality

By Murray Watnick, M.D.

Within a few weeks of Wilhelm Conrad Roentgen's discovery of the x-ray, a Boston physician named Francis Henry Williams (1852-1936) began to apply the new tool in his medical practice. In the BOSTON MEDICAL AND SURGICAL JOURNAL on April 30, 1896 in a correspondence entitled "Note on X-Rays," Doctor Williams reported on his first experiences with fluoroscopy of the chest, abdomen, and skull. Four cases were discussed: cardiomegaly, pulmonary tuberculosis, splenomegaly, and localization of a bullet in the forearm.¹ The exciting new field of diagnostic radiology was on the horizon.

Doctor Williams was well suited for his new endeavor. He had graduated from the Massachusetts Institute of Technology (M.I.T.) in 1873 with a bachelor of science degree and earned his M.D. at the Harvard Medical School in 1877. Subsequently he devoted his efforts to general therapeutics and the Materia Medica with appointments at the Harvard Medical School and Boston City Hospital. In 1892 he utilized bacteriological examinations to confirm diagnoses of diphtheria

and treated proven cases with antitoxin two years later, the first physician in Boston to do so.

With this excellent technical and medical background, Doctor Williams began vigorous experimentation with the newly discovered x-rays. He was quick to realize that, because of excellent transmission of x-rays through lung tissue, disease processes could be detected by alterations in tissue density. Chest fluoroscopy became his special field of interest, and he was in the vanguard of the "golden age of fluoroscopy." This preference for fluoroscopy was understandable in view of the 45 minutes required to expose a satisfactory chest plate in those days.³ The Boston City Hospital patients referred to Doctor Williams were initially transported to the Rogers Laboratory of M.I.T. for their fluoroscopic examinations. Subsequently in 1896 a small room in the basement of the Boston City Hospital was obtained and served as the center of Doctor Williams' radiologic activities until 1915. During this period the Department of Radiology of the Boston City Hospital was formed.⁴

In 1897 a paper by Doctor Williams in the Medical and Surgical Reports of the Boston City Hospital reported the highlights of his clinical radiological experience since early 1896.⁵ The report included a fairly sophisticated discussion of

MURRAY WATNICK, M.D., *Department of Radiology, Harvard Medical School and Peter Bent Brigham Hospital.*

coning devices and film-screen combinations. In later years he helped to design a "see-hear" for recording simultaneously both visual and auditory events in the thorax and a mechanical stereoscopic fluoroscope. Later in the paper he discussed the need for a definite fluoroscopic routine as comprehensive as the physical examination. As in the physical examination a knowledge of the normal had to be mastered before attempting to define the abnormal. Above all he emphasized the need for the radiologist to perform his examination objectively. He wrote, "At first, in order to make the x-ray examination without bias, I examined the patients with the fluoroscope before knowing anything of the physical examination. My object was to seek for any method that would assist in making a diagnosis as early as possible." A later section dealt with radiation protection. Unlike many other early radiologists, Doctor Williams and his close colleague, Dr. William Rollins, went through their entire careers without any injury secondary to x-ray exposure. Doctor Williams was aware of the potential danger of x-rays and developed sophisticated safety measures to prevent radiation injury.

In 1901 the first edition of Doctor Williams' classic textbook *The Roentgen Rays in Medicine and Surgery as an Aid in Diagnosis and as a Therapeutic Agent. Designed for the Use of Practitioners and Students* was published. Two later editions appeared in 1902 and 1903, rapidly becoming the basic guide of early American radiologists. The chest plate was now considered an essential part of the routine examination along with inspection, palpation, percussion, and auscultation. The serial chest x-ray was deemed necessary for determination of the activity of tuberculous foci with an accuracy not duplicated by physical signs. Along with his other interests, Doctor Williams was concerned with the economics of medical care. He understood the economic advantage of early diagnosis both in the better utilization of tuberculosis sanatoria and in the decreased cost to the patient. Doctor Williams wrote, "This information aids the physician to decide whether the patient should go away or remain at home, and to avoid the mistake of sending him away when he is beyond a reasonable hope of recovery, and of thus exposing him to the cruelties of a forlorn and expensive journey."⁶ The difference in cost to the tuberculous patient when diagnosed early rather than late was enormous. The average was a two-year period required for

cure in advanced cases as compared to six months when an early diagnosis was made.

In 1900 Doctor Williams acquired a 500 mg capsule of radium chloride from Doctor Rollins along with the suggestion that it might be used in the therapy of lupus vulgaris.^{4, 8, 9} He rapidly devoted more of his time to radiotherapy and may have been the first radiologist to utilize radium as a therapeutic modality. In 1904 he reported on the usefulness of radium in the treatment of acne, psoriasis, lupus vulgaris, lupus erythematosus, eczema, keloids, rodent ulcers, epidermoid carcinoma, and breast carcinoma.⁸ He understood radium's constant gamma ray output as opposed to the fluctuating electrically produced x-rays. In clinical trials treating one half of a lesion by each modality, he established radium's superiority and even speculated on the possibility of using radium for deep-seated lesions, anticipating the modern era of supervoltage therapy. He understood the potential alternative that radiotherapy offered to the patient with a "dread of the knife."¹⁰ The new rays were not to be feared as long as the necessary precautions were taken. Six years before his death he wrote a small volume, *Radium Treatment of Skin Diseases, New Growths, Diseases of the Eyes and Tonsils*.

Ruth and Edward Brecher in their history of radiology stated that Doctor Williams had no equal as a practicing clinical radiologist in the United States and Canada during the first year following Roentgen's discovery.⁹ We all are indebted to Francis Henry Williams, technician, inventor, internist, diagnostic radiologist, radiotherapist, and physician.

SUMMARY

Francis Henry Williams, a practicing Boston physician, began clinical application of the x-ray in early 1896 soon after Roentgen's discovery. He rapidly utilized the radiographic study as an integral part of his physical examination. His special interest was the chest and the early diagnosis of pulmonary tuberculosis. He also made outstanding contributions to radiographic technique and to radiotherapy and authored a classical textbook in 1901.

REFERENCES

- ¹Williams FH: Note on x-rays. *Boston Med Surg J* 134:451, 30 Apr 1896
- ²"Williams, Francis Henry" in *Dictionary of American Biography*, ed. by Schuyler RL. New York, Scribner, 1958. Vol. 22, Suppl. 2, p. 717

(Concluded on Page 432)

Editorials

DISCRIMINATION IN HOSPITALS

Published elsewhere in this issue is a well-reasoned paper supporting the proposition that physicians on hospital boards of trustees contribute a special expertise and a point of view which is valuable to the boards' deliberations.

At its recent Annual Meeting in Atlantic City the House of Delegates of the AMA reaffirmed the following policy:

Where legally permissible, physicians actively practicing in the community who are voting members of the medical staff shall be eligible for, and should be accorded, membership on hospital governing bodies and their action committees, with full voting privileges, in the same manner as are other knowledgeable and effective individuals. They should be nominated by the medical staff and they should be willing and able to serve.

The House further urged that appropriate legal action be sought "to remove existing legal barriers to physician representation on hospital governing boards", and also that the Joint Commission on Accreditation be requested to establish a requirement that, "where legally permissible, . . . the medical staff be represented by a voting member or members on the governing board of the hospital".

While these actions are not, of course, binding, they have been supported by policy statements of the American College of Surgeons and the American Hospital Association. Hospitals have in some instances accepted this philosophy, but resistance is not dying easily.

A leading hospital in the Providence metropolitan area recently adopted a bylaw amendment which in substance strengthened and reaffirmed a principle already in effect. The modified bylaw reads: "No physician, surgeon, dentist or other person who is a member of the medical staff shall be eligible to be a member of the Board of Trustees." A discriminatory *policy* is questionable enough, but a *written bylaw* which is discriminatory and binding is another matter.

Thus far we have addressed ourselves to certain policy statements of organized medicine. What, in fact, are the applicable provisions in the recently revised standards of the Joint Commission on Accreditation of Hospitals?

Standard I on Governing Body and Manage-

ment (*Accreditation Manual For Hospitals* 1970, page 21) provides that: "The governing body shall adopt bylaws in accordance with legal requirements and with its community responsibility, identifying the purposes of the hospital and the means of fulfilling them". This provision is general enough to warrant a variety of interpretations. The Commission's own Interpretation, however, which follows immediately below in the text, contains the following explanation: "The governing body or advisory board should include broad representation of the community served by the hospital and its members should be selected for their ability to participate effectively in fulfilling the governing body's responsibilities. Where legally permissible, physicians who are members of the medical staff *shall be eligible for* and should be included in, *full membership on hospital governing bodies* [italics added] and their action committees in the same manner as are other knowledgeable and effective individuals. Other physicians also should be considered eligible for membership in the governing body." To some extent this policy is more flexible than the House of Delegates of the AMA has desired, but it is conclusive in one important respect, i.e. in excluding discrimination by fiat.

At the recent AMA sponsored Conference on Revised Hospital Accreditation held in Atlantic City, the bylaw quoted above was submitted for opinion in a question to the closing panel. The answer in explicit language was given by Dr. John B. Porterfield, Director of the Joint Commission. "Exclusion of members of the active staff of a hospital from its governing body", he stated, "unless specifically agreed to by both (voluntarily of course!) is a violation of accreditation standards". The modifying clause was the *only* qualification stated.

It would be well for medical staffs in the Rhode Island area (and generally, for that matter) to examine the bylaws of their hospitals for such discriminatory exclusions, and seek corrections where necessary. When hospital governing bodies refuse to modify these exclusions, the Joint Commission on Accreditation of Hospitals should be notified.

REFERENCE

Joint Commission on Accreditation of Hospitals. *Accreditation manual for hospitals*, 1970. Chicago, Ill., 1971

DRUG STORES AND TOBACCO

Several hospitals in the Rhode Island area no longer tolerate cigarette vending machines on their premises or permit the sale of tobacco products in their hospitality shops. One Rhode Island hospital in fact was a pioneer in this endeavor. This is all to the good. Much remains to be done, however, in the anti-cigarette war. Rhode Island Blue Cross-Blue Shield, for example, still suffer the presence of cigarette vending machines in their headquarters building. This is ironical, indeed, since the primary function of these corporations (one of which has a close relationship with the Rhode Island Medical Society) is the dispensing of health dollars. There are, nevertheless, continuing signs of progress. One such development is the enlightened and unselfish action recently taken by America's druggists.

At the Annual Convention of the American Pharmaceutical Association in San Francisco the country's 54,000 drug stores were urged to halt the sale of all tobacco products. The association's 300 member House of Delegates approved the resolu-

tion without a single dissenting vote. This action establishes an anti-tobacco policy for all 37,000 members of the association. In its policy statement the association noted a "growing public concern about this public health hazard." Druggists were also urged to become involved personally in "educating young people on the health hazards of smoking." State associations and the student affiliate of the national association were also asked to engage in anti-smoking educational activities. The committee report, which was unanimously approved by the House of Delegates, stated that cigarette sales in pharmacies are "inconsistent with their functions as health institutions." This action follows one of a year ago in which the pharmacists voted to become active in anti-smoking education.

This is indeed an unselfish and public spirited undertaking, as drug stores have long engaged profitably from the sale of tobacco products. We certainly hope that pharmacists in the Rhode Island area will subscribe to the new and enlightened policy, and we congratulate them to the extent that they do so.

BABY'S DIAPER AND MY PLATE OF SOUP

We have commented before in these columns about the permissiveness of the Rhode Island State Department of Health in not insisting that restaurant and snack facilities in this state place a clean cover for each customer over table and counter surfaces. It is very unappetizing and possibly a source of contamination (e.g. staphylococcus and salmonella) to clean the eating surface by taking a quick swipe with a damp rag that has been lying around unsterilized for an indeterminate period of time.

Formica and resistant lacquers have been a boon to the restaurant trade, but also an encouragement to great carelessness. We have many times seen babies seated on service counters and tables, and it is scandalously common for ladies to place their handbags on these surfaces after resting them on the floor in all imaginable sorts of places. That lamp cloth does nothing to the table top and possibly becomes contaminated itself.

We have tried at times to thwart a server by placing paper napkins at our place as impromptu covers to bear the eating utensils, but almost invariably these utensils are placed on the service area next to the napkins. We hate to use knives and forks that have rested where baby's diaper rested but a few minutes before. A swipe of that damp rag doesn't relieve our sense of outrage, honed as it is by a lifetime of training in the principles of asepsis. While we undoubtedly live in a sea of bacteria, there is no sense in adding insult to injury.

Our personal consultant on paper products assures us that paper place mats may be obtained in quantity for less than one-half cent each. We would be happy to have this totally nominal amount added to the cost of our meal.

Please, State Health Department, hear our plea!

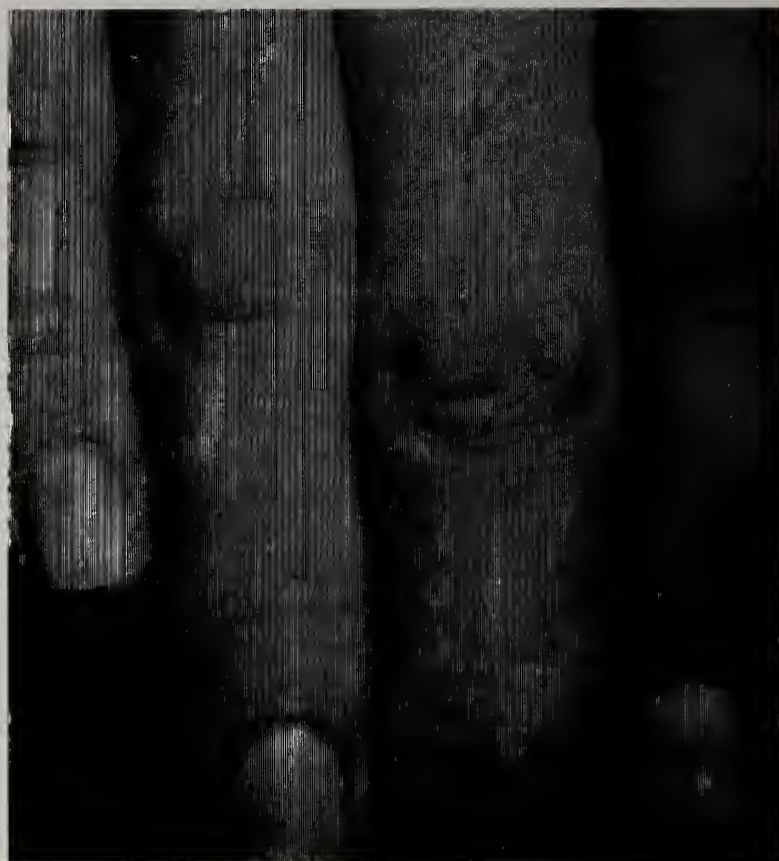


DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



(Left) Thick, smooth knuckles in a 30 year old man.



(Right) Thick, warty, yellowish knuckles in a 17 year old boy.

Answer on Page 430



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

DELIVERY OF HEALTH CARE FROM THE WASHINGTON VANTAGE POINT

(Continued From Page 408)

My Rhode Island colleague in Washington, Senator Claiborne Pell, has introduced "A Minimum Health Benefits and Health Services and Health Education Act" that would apply to the entire population and would establish a central role for major health insurers. Employers would be required to insure their employees on the family plan through policies provided by existing insurance sources grouped into special regional corporations. These agencies would also direct Medicare and Medicaid.

One of the least expensive plans, it would probably require no greater funding than the Government is now spending on health care for the poor and elderly.

SCOTT-PERCY HEALTH RIGHTS ACT

In contrast the Scott-Percy "Health Rights Act" would abolish both Medicare and Medicaid and replace them with two types of coverage: one for hospital cases, another for outpatients. Enrollment would be voluntary, and families would pay portions of their costs according to their incomes—with the Government providing the remainder if necessary.

Two other health acts would offer citizens more protection against catastrophic illnesses.

BOGGS-HOGAN PROPOSAL

The Boggs-Hogan proposal encourages private health insurers to provide persons extended coverage against such major illnesses. It offers Federal Government reinsurance against losses in instances where private companies paid out more in benefits than they received in premiums. The reinsurantee program would be financed through premiums paid by private insurers into a National Catastrophic Illness Insurance Fund.

The second measure, introduced by Senator Russell B. Long, would set up a national program of catastrophic health insurance for most people under 65. It would be part of the Social Security Program as a supplement to existing private health insurance. Payroll contributions for employers and employees would rise to a high of 0.4 per cent in 1980 on a wage base of \$9,000. Both Medicare and Medicaid would continue under the Long Plan although some individuals currently covered in the Medicaid Program would shift to this new one.

As you can see, this legislative litany of conflict-

(Continued on next page)

ERRATA

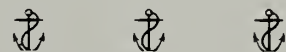
In the May, 1971 issue of this JOURNAL, Vol. 54 No. 5, the following corrections in the article, "The Epidemiology of Leukemia: Leukemia Epidemiology in North Kingstown, Rhode Island", should be noted:

On Page 256, 5th line beginning with the word "Over" and continuing to the 11th line ending with "(.01)" should be completely eliminated. 13th line, the word "amount" should be changed to "number;" 21st line, the word "reflect" should be changed to "reflects."

On Page 260, 18th line, 2nd column, "This patient lived in Kiefer Park" should read: "This patient lived in a naval plat."

On Page 261, 6th line, 1st column, "in the elementary school near Kiefer Park" should read: "in the elementary school near this naval plat."

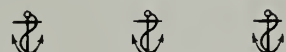
On Page 260, Table 11, Case 9, death date "11/6/69" should read: "10/26/69;" Case 14, "East Greenwich, R. I., 2 mo. from 11/69-1/70" should be aligned with "Length and Site of Residence before Onset," and not with "Length of Residence at Onset."



ONE SENTENCE ESSAY

There was a recent joke in Europe to the effect that in January scientists in the United States announced a new fundamental invention; in February the Russians announced that they had invented it ten years before; and in March the Japanese commenced large scale commercial shipments of the device into the United States.

. . . Joseph S. Wright, Chairman of the Board, Zenith Radio Corp.



MEDICAL DIRECTOR

A unique opportunity for an administrator and clinician to develop all aspects of a group practice in an emerging OEO-sponsored Health Maintenance Organization, while practicing primary medicine in existing Neighborhood Health Centers. Salary commensurate with qualifications and experience. Write c/o Planning Director, Providence Health Centers, 228 Thurbers Avenue, Providence, R. I. 02905.

For Insomnia... one capsule for the rest of the night

NOLUDAR®

(methyprylon)



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ing health bills poses a major problem for the nation, for the Congress, and, I might add, for me. Now that I have subjected you to this recitation, you, perhaps, are bewildered as well.

I do not wish to be contrary, but I am not totally satisfied with any of these bills.

My own thinking revolves around three needs that must be met: The need for our people to receive complete and quality medical care at a reasonable cost; the need to maintain the integrity and autonomy of professional medicine; and the need to draw upon existing health insurance sources to prevent the crushing burden of financing our health demands from being thrust entirely upon the taxpayer.

Noble words, but how, I have asked myself repeatedly, can I draft legislation which will implement my philosophy? Since there is as yet no Tiernan Health Plan, I obviously have not discovered a solution—a legislative health panacea which will meet my self-imposed and perhaps conflicting criteria of humanitarianism, free enterprise, and economy.

SUGGESTIONS AND ADMONITIONS

Thus it is with some trepidation and much humility that I offer the following suggestions and admonitions:

1. While I favor the initiation of the kind of Federal Health Insurance Program that will enable our citizens to meet the expenses of major illness, I would caution against the institution of any plan that would eliminate the private health insurance providers as a viable alternative.

Maintaining competitive public and private sections in health insurance would hopefully contribute to the lowering of health care costs while introducing positive innovations in the delivery of medical care.

2. Before Congress adopts any health care plan that involves the expenditure of greatly increased Federal funds, the effects of such a move on the economy ought to be well-considered.

In a period of acute inflation, such increased Government spending could accelerate a tendency that is not yet under control. The damage to the

(Concluded On Page 429)

(Concluded From Page 428)

3. I am also skeptical of any program that requires significant employer payments.

4. Some of the proposed plans strike me as rather lavish in certain of their provisions. For example, the Health Security Act allows for reciprocal and "buy-in" agreements to cover some non-resident aliens.

5. I would hope that any plan that is accepted would provide for a significant degree of professional self-regulation.

I am confident that the conscience of the medical profession is sensitive enough to the needs of our society to offer its own realistic supervision over rates and services. The integrity of professional medicine must not be undermined by whatever program is adopted.

6. I would object to any plan that calls for any kind of state funding. The public portion of any funding ought to come from Federal Government sources. The present fiscal burdens borne by the taxpayers of the states in general and our home state of Rhode Island in particular would motivate me to oppose vigorously any plan calling for state funding.

It is with these guidelines in mind that I am approaching the numerous health measures before Congress. They will be determining factors in any decision which I reach.

But before my decision is made I shall continue to seek the counsel of those, like yourselves, more knowledgeable in the intricacies of medical health care than I. Thus, I urge you to poll your membership and convey your views both collectively and personally to me and to other national representatives. I will weigh them carefully, for I feel that, if sufficient professional and consumer wisdom is carried to Congress, the goal we all seek will be achieved, and all Americans will be able to afford and enjoy the very best service that medical science can offer.

A Participating Extended Care Facility In Federal Medicare



Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.**GA Spee 1-2512**

Pharmacy License No. 225

certified titles: terms. For information
write or call owners: Box 568, Bangor,
Maine (207) 942-7588 or Box 477, Digby,
Nova Scotia (902) 245-4138.

JEJUNAL DIVERTICULOSIS

(Concluded From Page 416)

none of whom, however, had malabsorption or nutritional problems related to the disease. Farmer and Hoffman¹² reported jejunal diverticulosis as a cause of vitamin B₁₂ deficiency.

Montuschi⁶ of Great Britain in 1946 reported the case of a 66-year-old male who gave a history of recurrent abdominal pain and bouts of diarrhea. Stools varied from watery to pale, bulky, and offensive. He had had mild edema of the ankles which gradually spread involving the legs and distal parts of the thighs. There was some general weakness, but little dyspnea on exertion. Nutrition was indifferent. There was pitting edema of the legs. Although there was no anemia, total protein was 4.7 gm per cent with an albumin/globin ratio of 2.9/1.7. Gastrointestinal studies showed many diverticula of the small and large intestines, and precipitate passage of the barium through the small intestines, which showed a loss of normal mucosal pattern.

There was some improvement of diarrhea and feeling of well-being on a high protein low fat diet. Edema of the legs diminished, but persisted at the ankles. Serum proteins remained low. No surgery was reported.

During the discussion of the case, it was developed that jejunal insufficiency leading to hypoproteinemia and associated with jejunal diverticulosis had been described in the American literature. Montuschi concluded that "A low grade inflammatory process of the diverticula would appear to be the cause of intestinal hurry in this case leading to deficient absorption of proteins."

The American Board of Family Practice announces that its next examination for certification in various centers throughout the United States. The examination will be over a two-day period on April 29-30, 1972. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

PLEASE NOTE: Deadline for receiving completed application in the Board office is February 1, 1972.

SUMMARY

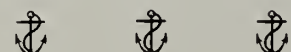
A case is reported of jejunal diverticulosis which caused acute and chronic blood loss, partial intestinal obstruction, and chronic protein loss associated with hypoproteinemia and peripheral edema. Resection of the involved jejunum resulted in total correction of the blood loss and protein wasting, confirmed by follow-up.

Acknowledgment. Extensive gastroenterological studies were conducted by Dr. Herbert Rakatansky. Metabolic studies were suggested by Dr. Robert P. Davis, Chief of the Department of Medicine, The Miriam Hospital

REFERENCES

- ¹Gordinier HC, Sampson JA: Diverticulitis (not Meckel's) causing intestinal obstruction; multiple mesenteric (acquired) diverticula of the small intestine **JAMA** 46:1585-90, 26 May 1906
- ²Case JT: Diverticula of small intestine, other than Meckel's diverticulum. **JAMA** 75:1463-70, 27 Nov 20
- ³Baskin RH JR, Mayo CW: Jejunal diverticulosis. A clinical study of 87 cases. **Surg Clin N Amer** 32:1185-96, Aug 52
- ⁴Benson RE, Dixon CF, Waugh JM: Non-meckelian diverticula of the jejunum and ileum. **Ann Surg** 118:367-93, Sept 43
- ⁵Bockus HL, et al.: **Gastroenterology**. Second edition. Philadelphia, W. B Saunders Company, 1963-1965. 3 vols.
- ⁶Montuschi E: Jejunal insufficiency with hypoproteinaemic oedema **Proc Roy Soc Med** 42:868-9, Nov 49
- ⁷Watkinson G, et al.: Massive jejunal diverticulosis with steatorrhea and megaloblastic anaemia improved by excision of diverticula. **Brit Med J** 2:58-62, 18 Jul 59
- ⁸Altmeier WA, Bryant LR, Wulsin JH: The surgical significance of jejunal diverticulosis. **Arch Surg** 86:732-45, May 63
- ⁹Samloff MI, Schenk EA: Celiac disease and multiple jejunal diverticulosis. **Amer J Dig Dis** 12:189-97, Feb 67
- ¹⁰Christensen N: Jejunal diverticulosis. **Amer J Surg** 118:612-18, Oct 69
- ¹¹Miller RE, McCabe RE, Salomon PF, et al.: Surgical complications of small bowel diverticula exclusive of Meckel's. **Ann Surg** 171:202-10, Feb 70
- ¹²Farmer RG, Hoffmann GC: Gastrointestinal causes of anemia. **Hosp Med** 6:95-8, passim, Sept 70

209 Angell Street
Providence, R. I. 02906



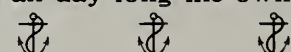
DERMAQUIZ ANSWER

(See Page 426)

(Left) The smooth, thick knuckles of a carpenter or a baker.

An occupation mark.

(Right) Morsus humanus (self bite). The boy enjoys chewing all day long his own knuckles.



AMERICAN MEDICAL ASSOCIATION ANNUAL MEETING

(Continued From Page 401)

an active responsible role in peer review and to document for the information of the public current functioning procedures and programs which are serving in the interests of delivering good medical care."

BETTER HEALTH AND BETTER PATIENT CARE

With respect to teenage pregnancy, the House adopted the statements that "The teenage girl whose sexual behavior exposes her to possible conception have access to medical consultation and the most effective contraceptive advice and methods consistent with her physical and emotional needs" and "The physician so consulted should be free to prescribe or withhold contraceptive advice in accordance with his best medical judgment in the best interests of his patient." Earlier in that report, the House inserted the statement that "definite effort should be made to obtain consent from the minor's parents or legal guardian whenever possible."

Regarding maternal and infant care, the House adopted a report pointing out that "Application of recent advances in scientific knowledge and skills in the intensive care management of high-risk pregnant women and high-risk newborn infants will result in reduction of present maternal and infant mortality. A major contribution to such a program is the development of a centralized community (or regional) hospital-based newborn intensive care unit. Concentration of high-risk infant care programs in hospitals specially staffed and equipped to provide optimal care is a proven life-saving mechanism for infants at risk."

Concerned with the spread of venereal disease, the House resolved:

That medical societies be urged "to support education of patients and the public through more extensive and more imaginative use of all available media and through school curricula;" that the AMA "reiterates its support and cooperation with the National Commission on Venereal Disease in order to hasten the control of these diseases;" and that the AMA "strengthen in every way possible research efforts toward the development of vaccines for the active immunization of our population against venereal disease."

On health education in schools, the House resolved to encourage state and local medical societies "to establish active liaison with their school

systems in order to provide lectures and appropriate educational support regarding: personal hygiene, the effects of tobacco and drugs, the problem of medical quackery and the role of physicians in maintaining good health."

To increase patient safety in hospitals, the House resolved that "medical staffs be urged to form a staff committee to cooperate with administration and lend guidance in developing safety programs that will include the concepts of prevention, detection, and correction, and which will fully utilize the expertise of physicians and other members of the health care team."

Considering the use of assistants in medical practice, delegates resolved that "the physician may properly delegate technical procedures to an allied health worker" but affirmed the principle "that whatever privileges may at any time be granted either to allied health workers or to independent limited practitioners, by law or otherwise, such grant in no way circumscribes the physician's authority in that field and in no way restricts the practice of medicine by the physician."

HOUSE OFFICERS AND MEDICAL STUDENTS

The House commended "those county medical societies which have opened participation opportunities to House Officers" and recommended to county medical societies "that reduced membership dues be provided for House Staff members."

Delegates also resolved:

To request the Board of Directors of AMA-ERF "to investigate the feasibility of providing financial aid for the continuation and coordination of the SAMA-MECO Project." (Medical Education and Community Orientation.)

To "urge that the Congress support increased Federal aid to medical students."

"That residency training in community hospitals is worthy of strong and continued support."

(Continued on next page)

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

To encourage "individual state societies to promote community programs in their states to provide facilities or loan programs for students which the student agrees to return to the community after training."

That individual members of the AMA "assume sustaining membership in the Student American Medical Association."

And that the AMA "offer active support and counsel to the Student American Medical Association for their community health projects."

ADDITIONAL ACTIONS AND EVENTS

Delegates adopted a 39-page report on Physician Manuower and Medical Education, prepared jointly by the Council on Medical Education and the Council on Health Manpower, with help from the Council on Medical Service.

They approved a progress report of the Board Committee on Professional Liability and filed for information an 89-page summary of Computer Systems in Medicine.

They adopted a Judicial Council report reaffirming the position "that the basic principles of a fair and objective hearing should always be accorded to the physician whose professional conduct is being reviewed. These basic guarantees are: a specific charge, adequate notice of hearing, the opportunity to be present and to hear the evidence, and to present a defense. These principles apply when the hearing body is a medical society tribunal or a hospital committee."

They adopted the report of the Council on Long Range Planning and Development which included these objectives for the AMA:

1. To maintain an active, viable organization representing the majority of physicians of the United States.

2. To serve as the central coordinating organization of medicine.

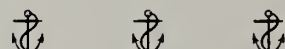
3. To serve as the representative of the medical profession in its relations with other health professions, industry, government, labor, consumers and other non-medical organizations.

4. To develop, stimulate and present scientific and professional programs and advances to the profession and public.

5. To continue its historic interest in all levels of medical education.

6. To assimilate recent medical graduates into the medical professional organizations.

7. To promote high standards of quality medical care.



THE SEVENTY-FIFTH ANNIVERSARY OF FRANCIS HENRY WILLIAMS' CLINIAL APPLICATION OF THE X-RAY

(Concluded From Page 423)

³Williams FH: Reminiscences of a pioneer in roentgenology and radium therapy, with reports of some recent observations. **Amer J Roentgen** 13:253-259, Mar 25

⁴Brown P: Francis Henry Williams, 1852-1936. **Amer J Roentgen** 36: 106-110, Jul 36

⁵Williams FH: A study of the adaptation of the x-rays to medical practice and some of their uses. **Med Surg Rep City Hosp Bost**, 1897. pp. 134-191

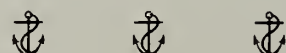
⁶Williams FH: **The roentgen rays in medicine and surgery as an aid in diagnosis and as a therapeutic agent**. New York, Macmillan, 1901

⁷O'Brien FW: Francis H. Williams, M.D., pioneer and contemporary. **Boston Med Surg J** 192:617-618, 26 Mar 25

⁸Williams FH: A comparison between the medical uses of the x-rays and the rays from the salts of radium. **Boston Med Surg J** 150:206-209, 25 Feb 04

⁹Brecher R, Brecher E: **The rays — a history of radiology in the United States and Canada**. Baltimore, Williams and Wilkins, 1969. p. 80

¹⁰Williams FH: Note on the treatment of epidermoid cancer by the roentgen rays. **Boston Med Surg J** 144:66, 17 Jan 01



TWO SENTENCE ESSAY

Only a few years ago, three open heart procedures a week were considered an active schedule. Today, we often have five procedures requiring use of the pump oxygenator under way simultaneously in one operating suite; throughout our medical center, 50 open heart procedures are often performed in one week.

. . . Michael E. DeBakey, *The Year Book of General Surgery* 1970.

AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

RHODE island MEDICAL JOURNAL

| | |
|--|-----|
| APLASTIC ANEMIA COMPLICATING ACUTE INFECTIOUS HEPATITIS: A CASE REPORT Maurice M. Albala, M.D., Sze K. Kaan, M.D., and Charles A. Pan, M.D. | 451 |
| "RADICAL" SPLENECTOMY IN HODGKIN'S DISEASE A. V. Migliaccio, M.D., and A. J. Migliaccio, M.D. | 455 |
| EVALUATION OF COLLATERAL MYOCARDIAL BLOOD FLOW FOLLOWING LONG TERM IMPLANTATION OF THE INTERNAL MAMMARY ARTERY IN THE DOG M. Kakvan, M.D., S. Carriere, M.D., R. Levy, M.D., and E. Gagnon, M.D. | 458 |
| SOME THOUGHTS ON THERAPEUTIC ABORTION Anthony P. Chatowsky, M.D. | 462 |
| Masters in Medicine ISAAC KAMINER, M.D. 1834-1901 PHYSICIAN, POET, AND SATIRIST Harry A. Savitz, M.D. | 467 |
| EDITORIALS | 469 |
| BOOK REVIEWS | 472 |
| HEALTH AND WELFARE LEGISLATION ENACTED BY THE RHODE ISLAND GENERAL ASSEMBLY— JANUARY SESSION, 1971 | 437 |

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

Health And Welfare Legislation Enacted By The Rhode Island General Assembly - January Session, 1971

LEGISLATION ENACTED

Battered Children

Approved by the General Assembly was a revision to a chapter formerly entitled "Injuries to Children" which provides for mandatory reporting of cases of child abuse by any individual who has reasonable cause to believe that a child has been battered or abused. Upon the receipt of such a report the Department of Social and Rehabilitative Services will have the child examined by a licensed physician who must make a written report of his findings to the Department.

Blood

A \$2,000 appropriation was approved for the Veterans of Foreign Wars to operate its bloodmobile, along with \$3,000 for the American Legion for the use of its bloodmobile, and a \$1,000 for the Knights of Columbus to operate its blood bank.

Consent of Minors

Winning approval were proposals to provide for the consent of certain minors 16 or over to surgical or medical treatment and to permit the immediate examination and treatment for illness resulting from the administration of drugs for persons from 18 to 21 years of age. A physical examination and the treatment by a registered physician, hospital and mental health facility upon an individual 18 years of age and over who has given his consent would not constitute an assault, or assault and battery on the individual treated.

Emotionally Disturbed Children

The General Assembly endorsed and the Governor signed into the law an act to create a state program for emotionally disturbed children within the Division of Mental Health, Retardation and Hospitals. The Society's Mental Health Committee recognized the significance of this legislation and supported the bill. Formerly the services for emotionally disturbed children were fragmented among various departments of the state government; the bill represents the review and judgment of an administrative task force which has

studied the problem for over two years. According to the act the emotionally disturbed child means any person under the age of twenty one years who has been diagnosed and judged by the examining physician to be in need of psychiatric care and treatment.

Eyeglasses

Also approved was a bill to regulate construction, sale, and distribution of eye glasses. The bill specifies that no person shall sell eye glasses or sun glasses unless they are fitted with heat-treated glass lenses except in those cases where a physician or optometrist has found that such lenses will not fulfill the visual requirements of a patient.

Flex

The Assembly passed legislation which would change the method of licensing healing art practitioners through the utilization of an examination prepared and scored by the Examination Institute Committee of the Federation of State Medical Boards of the United States, Inc., (FLEX). The bill, introduced by the Rhode Island Department of Health, initially had included in the terminology that chiropractors who had been certified after examination by the National Board of Chiropractic Examiners could be exempt from a state examination if the Division of Professional Regulation, in its discretion, had determined that the examination is substantially equivalent to or exceeds the requirements of an examination required by Rhode Island statute.

On the advice of legal counsel the Medical Society considered this provision a dangerous one since it would permit new chiropractic graduates to qualify without taking the state's own test. Dr. J. Jerry Rodos, Secretary of the State Osteopathic Association and Dr. William J. MacDonald, President of the Society, petitioned the House of Representatives in a statement to recommit the bill to committee since the views of the Medical So-

(Continued on Next Page)

R_x only: for better therapeutic control

| | |
|-------------------------------|--------|
| Each Berocca Tablet contains: | |
| Thiamine mononitrate..... | 15 mg |
| Riboflavin..... | 15 mg |
| Pyridoxine HCl..... | 5 mg |
| Niacinamide..... | 100 mg |
| Calcium pantothenate..... | 20 mg |
| Cyanocobalamin..... | 5 mcg |
| Folic acid..... | 0.5 mg |
| Ascorbic acid..... | 500 mg |

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B₁₂.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

in alcoholism

**Berocca[®] tablets
is therapy**

**With balanced, high potency
B-complex and C vitamins.**

No odor.

Virtually no aftertaste.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

ciety and the Rhode Island Society of Osteopathic Physicians and Surgeons were not heard. On a 34 to 30 division vote, the bill was recommitted to committee, the offensive provision deleted, and the bill passed both the House and Senate and was later signed by the Governor.

Hospital Rates

Also passed by both Chambers was an act which provides for negotiations of hospital costs and rates by the Blue Cross-Blue Shield of the state. The bill provides that the state act through the budget officer or his designated officer to be party to budget negotiations to determine payment rates for hospital costs by the state and hospital service corporations. The bill becomes effective on October 1, 1972.

Laboratory

Also favored was a bill to redefine the definition of clinical laboratories to include the words "and radio-bioassay".

Medical Licenses

Also approved by the Rhode Island General Assembly was a bill to permit the issuance of limited medical licenses to applicants who had completed not less than three years of study in a medical school instead of the current three and a half years.

Marathon House

A resolution to appropriate \$50,000 for Marathon House was amended to \$25,000 by the General Assembly. The appropriation was approved by the Governor. During the 1970 legislation session Marathon House received \$35,000 from the Assembly.

Optometry

Also enacted into law was a bill to amend the statutory definition of optometry to permit optometrists to use mydriatics, miotics, and topical anesthetics upon the successful completion of a course in pharmacology approved by the Board of Examiners in Optometry and the Chief of Pharmacy of the Department of Health. The bill won approval in both Houses after a vigorous campaign to educate the members of the General Assembly concerning the hazard of allowing non-medical people to use such drugs. Representatives from the Rhode Island Medical Society and the Rhode Island Ophthalmology Society conferred with Governor Licht concerning the bill and letters were forwarded to the state's Chief Executive; however, the Governor signed the measure.

Pesticides

Also meeting with the favor of the General Assembly was a measure which would bring under

(Continued on Page 441)

LEGISLATIVE REPORT

(Continued from Page 438)

the Pesticide Control Act a ban on the sale, use, transportation, and storage of trichlorophenoxy acetate.

Pollution

Pollution again was a popular subject with the legislators. Several measures supported by the Society were approved. Enacted legislation included a bill to extend to industrial, commercial, and institutional operation, a state ban on open burning, and also a bill to empower the Governor to proclaim several levels of air pollution dangers and to issue orders to control the pollution. Also approved was a bill to enlarge the Council of Environmental Quality from 11 to 17 members. The same act also abolished the Air Pollution Advisory Board, the Water Pollution Advisory Board, and the Advisory Health Council.

Prescriptions

Also approved was a bill to make it a misdemeanor with a fine of \$500 for a physician to sign and to deliver a prescription blank to anyone except a duly licensed pharmacist. The bill introduced by Representative Joseph Dalti Jr. had bill was amended in the House committee to make initially included a felony as the penalty, but the it a misdemeanor and further amended in the Senate to permit the blank prescription to be delivered to a duly licensed pharmacist by a physician.

Another bill concerning prescriptions which was adopted and signed by the Governor required that the physician's name and address lie clearly printed on all prescription slips.

Sight Foundation

Also approved was a \$2,000 appropriation to the Rhode Island Sight Foundation.

IMPORTANT BILLS NOT PASSED

Among bills which died in committee during the 1971 legislative session were two introduced by the Rhode Island Medical Society. These included a bill to provide that persons engaged in the transfusion of human blood and components should not be liable for damages except for their own negligence or willful misconduct. A second bill would have amended the Workman's Compensation statute to increase the compensation for total permanent occupational deafness from noise induced hearing loss. Efforts were made by representatives of the Society to dislodge both bills from their respective committees in the House but the attempts were unsuccessful.

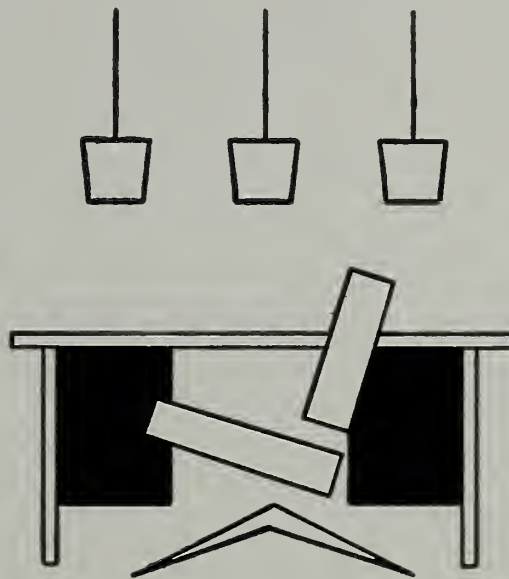
(Continued on Page 477)

Attractive & Functional Offices

by

BENÉ & CO.

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

THE NIGHT SHIFT OF DEPRESSION...

Depression is a 24-hour-a-day problem... and disturbed sleep is often its nocturnal expression. In fact, such disturbance may be a key symptom in establishing the diagnosis of depression.



PHYSICIANS SEEK RHODE ISLAND OPPORTUNITIES

Amboo K. Patel, M.D.
P. O. Box 70
Inverness, Nova Scotia
Canada
General and/or Thoracic Surgery
* * *

Michael F. O'Connor, M.D.
15520 Windmill Pointe Drive
Grosse Pointe Park, Mich. 48230
General Practice in Rural Section
* * *

Norman R. Grover, M.D.
120A Mason Street
Fort Huachuca, Arizona 85613
Ophthalmology
* * *

Rene I. Marasigan, M.D.
3143 Sands Place
Bronx, New York 10461
Pediatrics
* * *

Warren V. Kindig, M.D.
143 Jefferson Street
Hartford, Conn. 06106
Pathology in Hospital or Laboratory
* * *

Robert P. Morris, M.D.
261 Lenox Road, Apt. 6-H
Brooklyn, New York 11226
Ophthalmology
* * *

A. Mouttapa, M.D.
6N, 2829 Sedgwick Avenue
Bronx, New York 20468
Pediatrics
* * *

R. H. Retter, M.D.
639 Albany Avenue
Apt. 2G
Brooklyn, New York 11203
Ophthalmology
* * *

Joseph W. Placer, M.D.
Department of The Army Hdqs.,
U.S. Army Hospital,
Heidelberg
APO New York 09102
Pathology
⌘ ⌘ ⌘

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE



Same price as
150-ml. size *

Two dosage
strengths—
125 mg./5 ml.
and
250 mg./5 ml.

V-Cillin K[®], Pediatric

potassium
phenoxymethyl
penicillin



100210

*Additional information
available to the
profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206

**Based on Lilly selling price to wholesalers.*

Aplastic Anemia Complicating Acute Infectious Hepatitis: A Case Report

*Author Reports Rare And Ominous
Complication Of Viral Hepatitis*

By Maurice M. Albala, M.D., Sze K. Kaan, M.D.,
and Charles A. Pan, M.D.

Aplastic anemia is a rare and ominous complication of acute infectious viral hepatitis.¹⁻⁶ The pathogenesis of this syndrome is not well understood. This report describes a patient who developed a fatal aplastic anemia while convalescing from infectious viral hepatitis.

CASE HISTORY

R.G., a 21 year old, white, single male floor cleaner was admitted to the hospital on January 19, 1968 for evaluation of asymptomatic jaundice. He had been well until three days prior to admission when he noticed dark urine and light-colored stools. There was no known exposure to noxious chemicals or hepatotoxic or myelotoxic agents. He had not received any blood transfusions or parenteral medications. His diet was well balanced, and he denied consumption of alcoholic beverages.

MAURICE M. ALBALA, M.D., *Physician-in-Charge, Division of Clinical Hematology, Department of Medicine, Rhode Island Hospital, Providence, Rhode Island*

SZE K. KAAAN, M.D., *Division of Clinical Hematology, Department of Medicine, Rhode Island Hospital, Providence, Rhode Island*

CHARLES A. PAN, M.D., *formerly, Department of Pathology, Rhode Island Hospital, Providence, Rhode Island*

Physical examination revealed a young man in good general condition and in no acute distress. Both his skin and sclerae were deeply icteric. Liver and spleen were not palpable and no abdominal tenderness was elicited.

On admission, the hemoglobin was 14.5 m per cent, Hct 46 per cent, white blood count (WBC) 6800/mm³ with 48 per cent segmented neutrophils (polys), 49 per cent lymphocytes, 3 per cent monocytes. Platelets were described as adequate on the blood smear. Total bilirubin was 11 mg per cent with 6.1 mg per cent direct reacting fraction. The thymol turbidity was 5.0 U, cephalin flocculation 2÷ in 24 hours, 4÷ in 48 hours. Serum glutamic oxalacetic transaminase (SGOT) was 1190 units. The serum alkaline phosphatase was 12 KA units and remained normal throughout. The prothrombin activity was 81 per cent. Mononucleosis slide test was negative. Chest x-ray examination was normal.

The patient was treated conservatively with bed rest and a high carbohydrate diet. On the 29th hospital day he developed ecchymosis, petechiae, and gingival bleeding. Examination revealed deepening jaundice, but sensorium was clear. Liver edge was palpable. SGOT rose to 4300 units and three days later, fell to 615 units. Serum bilirubin was 13 mg per cent with 6.4 mg per cent direct reacting

(Continued on Next Page)

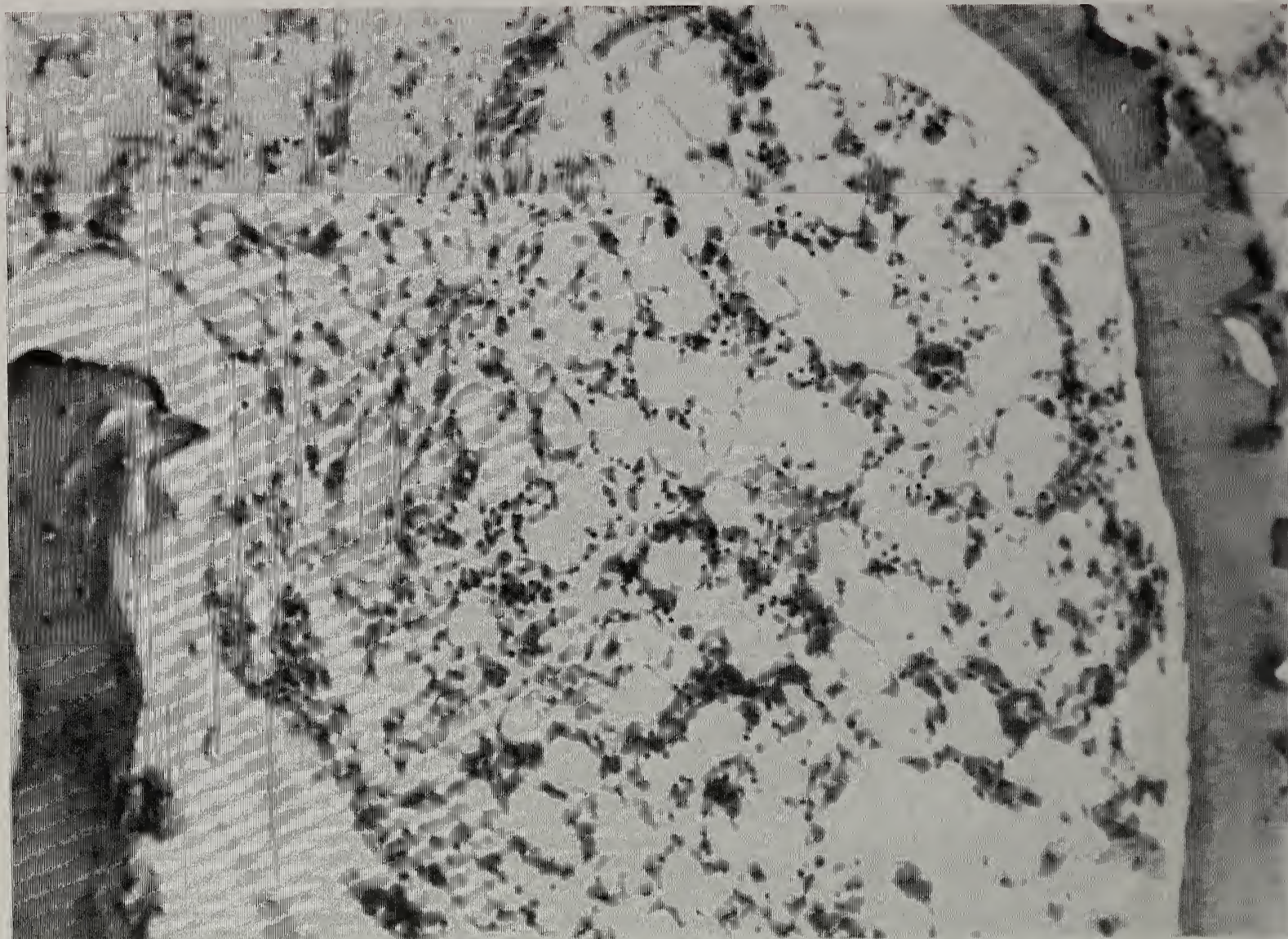


Figure 1

The bone marrow is markedly hypocellular and consists primarily of lymphocytes and histiocytes. Only occasional hematopoietic cells are seen. (H&E x 200)

fraction. The prothrombin activity was 63.5 per cent. Serum protein electrophoresis was normal. Three L-E cell preparations were negative. The direct and indirect anti-globulin tests (Coomb's test) were negative.

Examination of the peripheral blood at this time showed a hematocrit of 34 per cent, Hgb. 12.5 gm per cent and a WBC of $2200/\text{mm}^3$ with 10 per cent polys, 78 per cent lymphocytes, 12 per cent monocytes. Platelets were $70,000/\text{mm}^3$. A bone marrow aspirate was markedly hypocellular, megakaryocytes were sparse, and both erythroid and myeloid activities were depressed with a relative increase in lymphocytes. Cytoplasmic vacuolization was present in all cellular elements, but no leukemic cells were seen. These findings were confirmed by a second bone marrow aspiration done a week later. He was treated with Prednisone in the dosage of 60 mg daily and transfused with 5 units of fresh whole blood. Despite this therapy, his bleeding manifestations did not improve and his hematologic status continued to deteriorate. The hematocrit fell to 17 per cent with a Hgb. of 5.5 Gm. per

cent, WBC $200/\text{mm}^3$, and a platelet count of $20,000/\text{mm}^3$.

One week prior to his death, he spiked an intermittent fever as high as 104°F . Cultures of blood, throat, and urine were unrevealing. Patient was placed on lincomycin intravenously, but expired on the 47th hospital day.

At autopsy the gastric mucosa showed focal hemorrhages, and the stomach contained approximately 100 ml of bloody fluid. The liver was firm and weighed 2500 grams. Histologically there was preservation of the basic liver architecture with a normal relation of portal tracts to central veins. The portal tracts were moderately enlarged and contained a few lymphocytes, histiocytes, and proliferated bile ductules. In some areas there were thin fibrous septa along the periphery of lobules, but did not connect to the adjacent portal tracts. The centrilobular areas displayed varying degrees of necrosis, dilation of central veins, and in some places a coagulum of fibrin and red blood cells. The liver cell plates were two and three cells thick, and showed a moderate degree of disorganization. Mod-

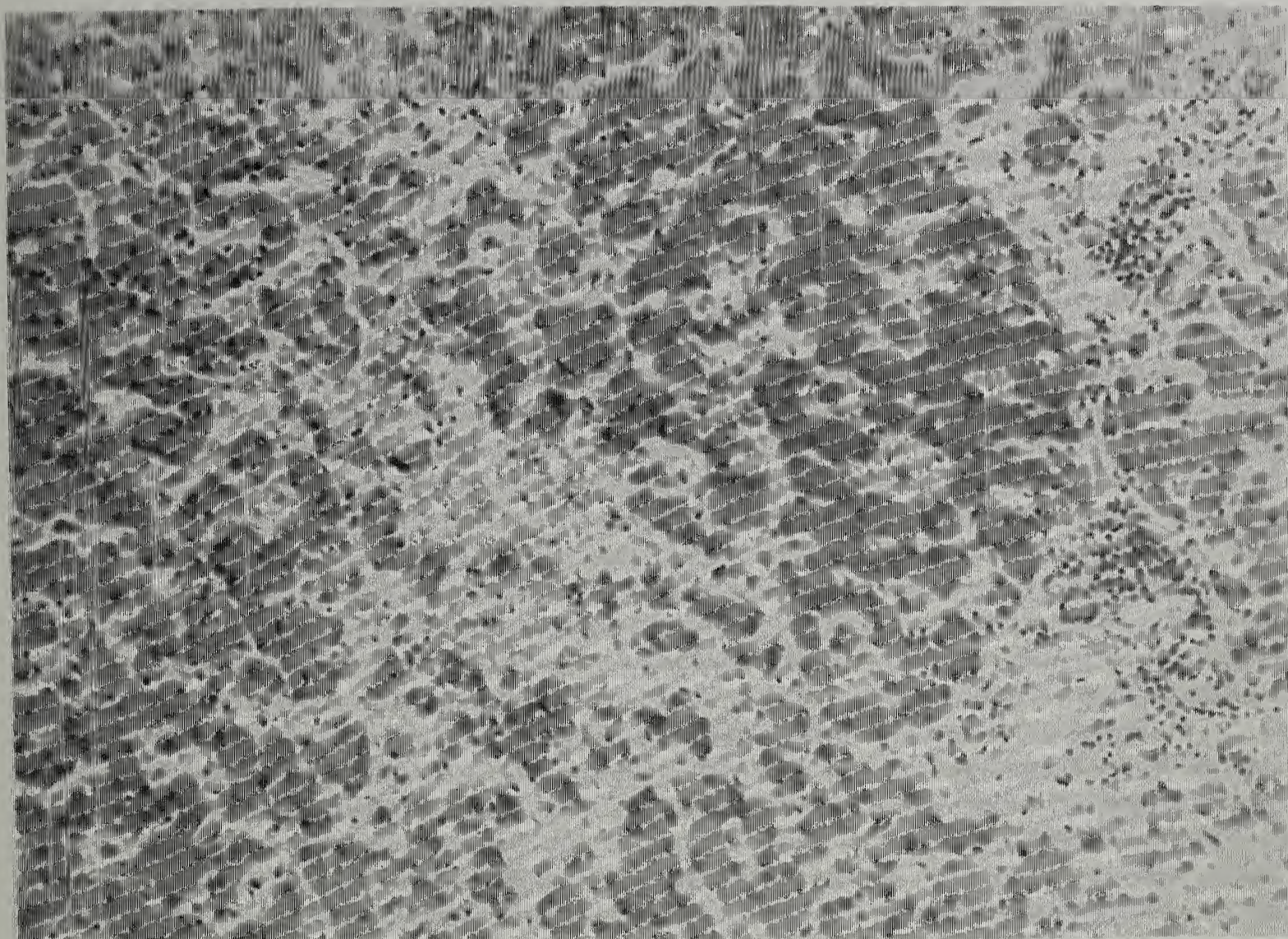


Figure 2

This section of liver shows loss of hepatocytes in the centrolobular area. Kupfer cells are prominent. Portal tracts (at left) are widened and show infiltration by small aggregates of lymphoid cells and proliferation of bile ducts. Note thin fibrous bands extending from one portal tract toward the adjacent one. (H&E x 200)

erate cholestasis particularly in the central areas, was noted. Small foci of bacteria were distributed irregularly throughout the liver. These findings were considered consistent with healing hepatitis in a regenerating phase.

The bone marrow was severely hypoplastic and composed principally of lymphocytes and histiocytes. Occasional myeloid and erythroid elements were noted, but megakaryocytes were absent.

The chest showed a bilateral hemothorax. Small hemorrhages were also observed on the testes, kidneys, and lungs. No abnormalities were found in the central nervous system, and there was no gross or microscopic evidence of bacterial infection.

DISCUSSION

Hematologic abnormalities associated with liver disease have been extensively described. The frequent association of chronic liver disease with anemia, leukopenia, and thrombocytopenia is well documented, and pathogenetic mechanisms such as folic acid deficiency^{7, 8}, hypersplenism⁹, nutri-

tional factors^{7, 10}, hemorrhage¹¹, or hemolysis^{8, 12} have been implicated.

Less known, however, are the mechanisms responsible for the anemia in patients with acute liver disease. Hemolysis¹³⁻¹⁶ has been observed in patients with acute infectious hepatitis.

Ordinarily, however, the hematological manifestations of infectious hepatitis are not clinically conspicuous. Early leukopenia in hepatitis was recognized by Archard and Loeper in 1901¹⁷. Havens et al¹⁸ noted the early appearance of leukopenia with lymphopenia and neutropenia. By the end of the second week there was a return to normal leukocytic relationships.

Aplastic anemia complicating acute infectious viral hepatitis is observed with increasing frequency.²⁻⁶ More than thirty cases have been reported since 1955. The association of these two clinical entities can no longer be considered as coincidental. It has a distinct predilection for males,

(Continued on Next Page)

with the highest incidence in children and young adults. This hematologic complication generally occurs from one to seven weeks after the onset of viral hepatitis. In our patient aplastic anemia developed four weeks after the onset of viral hepatitis at a time when the clinical manifestations of the disease were subsiding. Most of the patients with this disorder have died from complications associated with marrow aplasia⁴.

There was no history of exposure to any known toxic agents. However, this does not rule out the possibility that some ordinary non-toxic chemical agent might become cytotoxic when liver function is altered, as has been suggested by Levy et al.² This hypothesis does not seem likely. A careful and detailed clinical history did not disclose any exposure to chemical agents.

Mackey et al¹⁹ have suggested that marrow aplasia might be the result of an autoimmune mechanism following the onset of hepatitis. This abnormal serum reactivity might result in severe cytotoxic effect in some hypersensitive individuals resulting in hemolytic anemia or bone marrow aplasia. They demonstrated the presence of an autoantibody in the serum of patients with acute infectious hepatitis and other liver diseases. This antibody fixes complement in the presence of human tissue hemogenates and might be responsible for clinical disease.

Bone marrow failure might conceivably be the result of viral infections of the hemopoietic tissue. Hammon and Enders in 1939²⁰ described a virus disease of cats characterized by fever, pancytopenia, and marrow aplasia. They suggested that the marrow involvement was probably due to a direct infection of the hemopoietic tissue. More recently bone marrow failure characterized by erythroid hypoplasia and maturation defects of myeloid and megakaryocytic cells has been reported in mice in which hepatitis was induced by a mouse hepatitis virus strain (MHV-3).²¹ In these animals a high virus concentration was found in the bone marrow and lymphopoietic tissues, suggesting that the hemopoietic changes might be produced by an active multiplication of the virus in these organs. Bone marrow hypoplasia has also been reported in humans inoculated with the virus of the Venezuelan equine encephalitis.²² Thrombocytopenia or pancytopenia has occasionally been described following various viral infections.^{23, 24}

It has been clearly established that infectious hepatitis is a generalized disease. Lesions of the gastro intestinal tract and of the renal paren-

chyma, and hemotological abnormalities have been described.¹⁵ The viremia of infectious hepatitis is generalized and the virus is demonstrated in the blood, urine, and feces¹⁵ It is reasonable to assume that the patient described in this report developed a severe viremia during the height of his illness. Bone marrow aplasia may then have resulted from the injurious effect of the infectious hepatitis virus.

SUMMARY

A case of fatal aplastic anemia complicating acute infectious hepatitis is reported. The possible mechanisms leading to bone marrow aplasia are discussed.

REFERENCES

- ¹Dische FE, Golding JR: Agranulocytosis associated with infective hepatitis. **Brit Med J** 2:738-740, 28 Sep 57
- ²Levy RN, Sawitsky A, Florman AL, et al.: Fatal aplastic anemia after hepatitis. **New Eng J Med** 273:1118-1123, 18 Nov 65
- ³Deller JJ, Cirksema WJ, Marcarelli J: Fatal pancytopenia associated with viral hepatitis. **New Eng J Med** 266:297-299, 8 Feb 62
- ⁴Rubin E, Gottlieb C, Vogel P: Syndrome of hepatitis and aplastic anemia. **Amer J Med** 45:88-97, Jul 68
- ⁵Perlmutter RA: Hepatitis and aplastic anemia. **Calif Med** 110:135-138, Feb 69
- ⁶Line FG, Bellamy BB: Fatal aplastic anemia after viral hepatitis in a ten-year-old child. **Clin Pediat** 9:371-373, Je 70
- ⁷Jandl JH, Lear AA: The metabolism of folic acid in cirrhosis. **Ann Intern Med** 45:1027-1044, Dec 56
- ⁸Jandl JH: The anemia of liver disease: Observations on its mechanism. **J Clin Invest** 34:390-404, Mar 55
- ⁹Nance WE, Riven S: Hypersplenism in Laennec's cirrhosis. **Amer Pract** 13:63-67, Jan 62
- ¹⁰Jarrold T, Vilter RW: Hematologic observations in patients with chronic hepatic insufficiency. **J Clin Invest** 28:286-292, Mar 49
- ¹¹Wintrobe MM: **Clinical Hematology**. 6th ed. Philadelphia, Lea & Febiger, 1967, p. 547
- ¹²Hyman GA, Southworth H: Hemolytic anemia associated with liver disease. **Amer J Med Sci** 221:448-456, Apr 51
- ¹³Kivel RH: Hematologic aspects of acute viral hepatitis. **Amer J Dig Dis** 6:1017-1031, Nov 61
- ¹⁴Pitcher CS, Williams R: Reduced red cell survival in jaundice and its relation to abnormal glutathione metabolism. **Clin Sci** 24:239-252, Apr 63
- ¹⁵Conrad ME, Schwartz FD, Young AA: Infectious hepatitis — A generalized disease. **Amer J Med** 37:789-801, Nov 64
- ¹⁶Raffensperger EC: Acute acquired hemolytic anemia in association with acute viral hepatitis. **Ann Intern Med** 48:1243-1253, Je 58
- ¹⁷Achard and Loeper (1901), cited by Cockayne EA: Catarrhal jaundice, sporadic and epidemic, and its relation to acute yellow atrophy of the liver. **Quart J Med** 6:1-28, 1912-1913
- ¹⁸Havens WP, Marck RE: The leukocytic response of patients with experimentally induced infectious hepatitis. **Amer J Med Sci** 212:129-138, Aug 46
- ¹⁹Mackay IR, Gajdusek DC: An "autoimmune" re-

(Concluded on Page 480)

"Radical" Splenectomy In Hodgkin's Disease

*Permits Removal Of All Potentially
Involved Tissues And Effects Demarca-
tion For Radiotherapist*

By A. V. Migliaccio, M.D., F.A.C.S. and
A. J. Migliaccio, M.D., F.A.C.S.

During the past decade innovative concepts have been advanced which have encouraged re-evaluation of the treatment of Hodgkin's Disease. Gilbert, Easson, Peters, Kaplan, Johnson, DeVita, Serpick, and Carbone¹⁻⁸ have been in the forefront of those "who have helped to drown out the old pessimism with unbridled optimism".

"Staging" of the disease in four categories provides an opportunity to treat affected patients more effectively. Medical evaluation of the stage of the disease is unreliable. However, surgical exploration when indicated, with biopsy of the liver, biopsy of the para-aortic nodes, and splenectomy, will insure the proper course of therapy.

In our hospital series we have seen positive lymph nodes in patients with negative lymphangiograms, large spleens which were normal, and small spleens which were pathological. The same lack of relationship between size and pathology has been true with livers whether enlarged or not enlarged. Liver function studied as evaluated by DeVita et al.³ are helpful, but there is serious doubt as to whether one should wait for liver func-

tion changes to indicate the presence of liver involvement.

"Radical" splenectomy is presented as an additional step forward. The procedure is somewhat analogous in concept to the wide resection applied in some operations for cancer of the proximal segment of the stomach.

A review of the literature indicates that surgical approach to the spleen has customarily been through the gastrocolic omentum. While this technique, which is described in many surgical textbooks and atlases, provides an excellent approach in traumatic cases, it leaves much to be desired in Hodgkin's and certain other diseases. If one fails to remove the gastrosplenic and splenocolic ligaments, and most of the splenic pedicle as well, one leaves behind not only a gland-bearing and possibly involved area, but also those structures in which most of the accessory spleens are found.

If the gastrosplenic and splenocolic ligaments, and a long splenic pedicle are retained, portions of these structures will be protected by the kidney screen when cobalt therapy is administered. If positive glands are present in these structures, cobalt therapy cannot be total.

In order to eliminate this possibility we have been carrying out what, for want of a better term,

(Continued on Next Page)

A. V. MIGLIACCIO, M.D., F.A.C.S., *Consulting Surgeon, Rhode Island Hospital.*

A. J. MIGLIACCIO, M.D., F.A.C.S., *Associate Surgeon, Rhode Island Hospital.*



Figure 1
Silver clips properly placed on splenic artery.

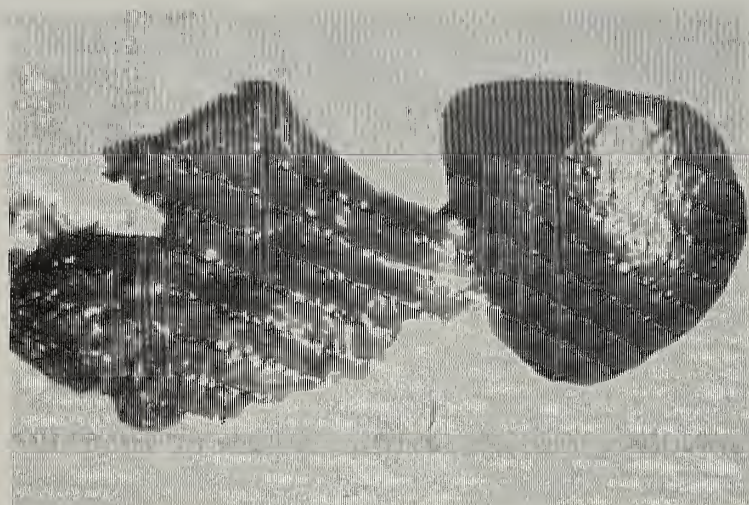


Figure 3
Enlarged but otherwise normal spleen, gastrosplenic and splenocolic ligaments, splenic pedicle, and greater omentum.

we have called a radical splenectomy. The steps are as follows:

1. Free the greater omentum from the left half of the transverse colon. This is through an avascular plane and can be accomplished easily and with dispatch.
2. Transect the greater omentum upwards towards the colon (taking out one half or more, depending on the extent of the pathology).
3. Continue this upward dissection in the gastrosplenic omentum until the greater curvature of the stomach is reached.



Figure 2
Positive para-aortic lymphnodes.
Lymphangiogram reported to be negative.
Courtesy of Dr. Francis L. Scarpaci

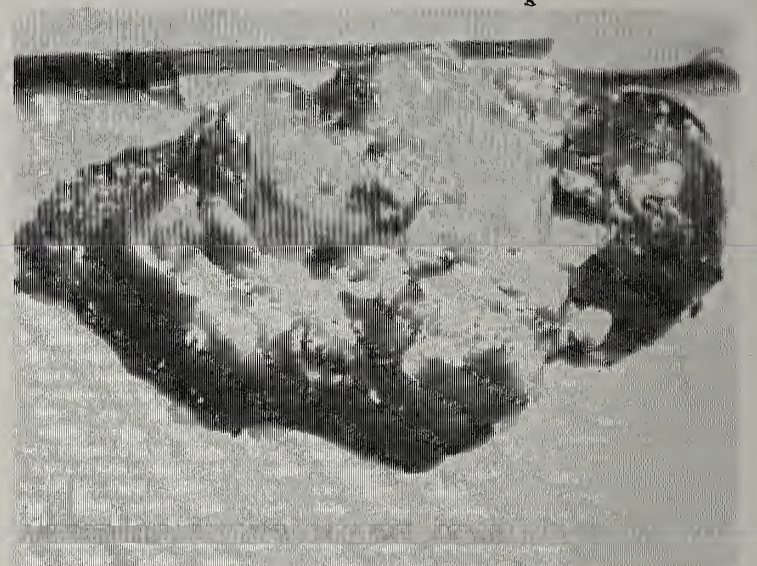


Figure 4
Mass of retroperitoneal nodes, slightly enlarged spleen, omentum, splenocolic and gastrosplenic ligaments. Entire mass on palpation of abdomen was felt to be an enlarged spleen.

4. Clamp, cut, and tie the attachment of the gastrosplenic omentum close to the greater curvature of the stomach as during a gastrectomy. The left half of the gastrosplenic omentum and the gastrosplenic ligament are thus freed. Care must be taken as one approaches the esophagogastric junction, as carelessness here may lead to annoying bleeding.

5. Free the left edge of the greater omentum from the splenic flexure of the colon and continue upwards to free the splenocolic ligament.

6. With the lesser peritoneal sac now wide

open, the splenic artery is identified as it courses along the upper border of the pancreas. This artery plus areolar and glandular tissue is dissected free. Two silver clips are placed as close to the origin of the splenic artery as possible. These should never be more than five centimeters to the left of the spinal column. This procedure is useful to the radiotherapist. The artery is transected and then swept towards the spleen, together with any glands which may be present.

7. The tail of the pancreas is elevated, and the splenic vein is isolated as far as possible. It is then divided.

8. The spleen is elevated out of its bed and removed along with most of its pedicle, the gastrosplenic and splenocolic ligaments, and the greater omentum. At times some of the tail of the pancreas must be removed.

This procedure is safe and no more difficult than the one used routinely. It offers many worthwhile advantages in that it:

1. Stakes out the area so that so-called total axial lymph node irradiation can be carried out without fear of causing radiation nephritis.

2. Removes the structure harboring most of the accessory spleens, which frequently are not identified.

Grays Anatomy states: "Frequently in the neighborhood of the spleen, and especially in the gastrosplenic ligament and greater omentum, small nodules of splenic tissue are present. They are known as accessory spleens and vary in size from that of a pea to that of a plum." Autopsies reveal that these structures are present in about 10 per cent of cases.

CONCLUSIONS

1. Progress is being made in the understanding and treatment of Hodgkin's Disease.

2. The life span of victims of this disorder has been lengthened.

3. Surgical exploration of the abdomen is of help in that it allows accurate staging.

4. The technique of "radical" splenectomy is described in detail for consideration and evaluation. The authors believe that it is a safe procedure, which permits the removal of all present and future potentially involved tissues in the left upper quadrant and also permits the demarcation of the end of the splenic pedicle with silver clips, as desired by the radiotherapist.

REFERENCES

- ¹Easson EC: Possibilities for the cure of Hodgkin's disease. **Cancer** 19:345-350, Mar 60
- ²Johnson RE, Thomas LB, Schneiderman M, et al.: Preliminary experience with total nodal irradiation in Hodgkin's disease. **Radiology** 96:603-8, Sep 70
- ³DeVita VT, Jr, Serpick AH, Carbone PP: Combination chemotherapy in the treatment of advanced Hodgkin's disease. **Ann Intern Med** 73:881-95 Dec 70
- ⁴Durant JR: Treatment of Hodgkin's disease: With what and by whom? Editorial. **Ann Intern Med** 73:1033-35, Dec 70
- ⁵Kaplan HS: The radical radiotherapy of regionally localized Hodgkin's disease. **Radiology** 78:553-61, Apr 60
- ⁶Salzman JR, Kaplan HS: Effect of prior splenectomy in hematologic tolerance during total lymphoid radiotherapy of patients with Hodgkin's disease. **Cancer** 27:471-8, Feb 71
- ⁷Peters MV: A study of survivals in Hodgkin's disease treated radiologically. **Am J Roentgenol** 63:299-311, Mar 50
- ⁸Gilbert R: Radiotherapy in Hodgkin's disease (malignant granulomatosis). **Am J Roentgenol** 41:198-241, Feb 39

196 Broadway
Providence, Rhode Island 02903



HEALTH HAVENS NURSING HOME

A Participating Extended Care Facility
In Federal Medicare



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail

East Providence

Tel. 438-4275

JCAH Accredited

Evaluation Of Collateral Myocardial Blood Flow Following Long Term Implantation Of The Internal Mammary Artery In The Dog

Blood Flow And Survival Rate Indicate That Vineburg Procedure Provides Functional Revascularization

By M. Kakvan, M.D., S. Carriere, M.D.,
R. Levy, M.D., and E. Gagnon, M.D.

Evaluation of the effectiveness of the Vineberg operation^{1, 3-5} for inducing myocardial revascularization has been based on indirect measures of myocardial blood flow. For example, radiographic demonstration of anastomoses between the implanted artery and the coronary vascular bed have been demonstrated both at autopsy^{2, 6} and in the living patient⁷ by the injection of radiopaque material in the coronary arteries. In addition, determinations of myocardial lactate extraction before and after implantation have been presented as evidence of increased myocardial flow to the ischemic heart^{8, 9, 18}. Although techniques for the direct measurement of coronary blood flow have been developed both for clinical and laboratory use,^{10-14, 17} only a few investigators have reported

measurements of flow in the chronically implanted artery^{20, 15}.

In this study we evaluated the perfusion of such revascularized myocardial areas by measuring the flow in the internal mammary artery supplying the implant area after the development of chronic myocardial ischemia using a Krypton 85 (⁸⁵Kr) indicator dilution method.

METHOD AND PROCEDURES

The experiments were carried out in two stages.

Stage I: Implantation of the internal mammary artery and creation of chronic myocardial ischemia. Seventeen healthy adult mongrel dogs (20-25 kg body weight) were anesthetized with intravenous sodium pentobarbital (25 to 30 mg/kg). The dogs were intubated and artificially ventilated with oxygen using the Bird respirator. A left thoracotomy was performed in the fifth interspace.

The left internal mammary artery was isolated by dissection, and all collateral branches were ligated and divided up to the level of the sixth interspace. A long curved hemostat was inserted into the anterior wall of the left ventricle and advanced through the myocardium parallel to the anterior wall for a distance of 4 to 6 cm. At this position the tip of the hemostat was driven through the epicardial surface, thereby creating a

M. KAKVAN, M.D., *Assistant in Surgery, Miriam Hospital, Providence, Rhode Island; Instructor in Surgery, Division of Biological and Medical Sciences, Brown University, Providence, Rhode Island.*
S. CARRIERE, M.D., *Associate Professor in Medicine, University of Montreal, Montreal, Canada.*

R. LEVY, M.D., *Associate Professor in Surgery, University of Montreal, Montreal, Canada.*

E. GAGNON, M.D., *Associate Professor in Surgery, University of Montreal, Montreal, Canada.*

potential tunnel 4 to 6 cm in length at a depth of 5 mm. A length of No. 00 silk was fixed in the jaws of the hemostat and pulled retrograde through the tunnel. The proximal end of the divided internal mammary artery was then tied to one end of the silk and drawn into the myocardial tunnel. After the selection of the proper length of vessel to be implanted, the artery was withdrawn from the tunnel and two good sized collateral side branches were severed. The mammary artery was pulled back into the tunnel so that the freely bleeding collaterals were positioned in the center of the tunnel. The segment of the artery at the entry of the tunnel was sutured to the epicardium.

Chronic ischemia was established by ameroid constrictors with an inside diameter (I.D.) of 2.87 mm and an outside diameter (O.D.) of 8 mm. In 9 animals separate rings were placed on the left anterior descending and the circumflex branches of the left coronary artery. In 8 animals one ring was placed distal to the septal branch of the anterior descending left coronary artery. The chest was closed in a routine manner. Twenty ml of anti-canine-distemper, anti-hepatitis-leptospira serum was given, and for 5 days penicillin and streptomycin were administered intramuscularly.

Stage II: Determination of blood flow in the implanted artery. Six to eight months after stage one, blood flow through the implanted artery was measured. After induction of pentobarbital anesthesia, intubation, and institution of artificial ventilation on a Bird respirator, a left thoracotomy was performed in the third interspace. A segment of the implanted internal mammary artery proximal to the myocardial surface was dissected free. A polyvinyl catheter O.D., 0.030 inch and I.D., 0.015 inch⁶, mounted on a curved needle, was passed through the wall and into the lumen of the artery. The tip was then pushed forward through the wall of the artery and attached by a knot on the external surface of the vessel wall. Side holes were then constructed near the tip of the catheter. The needle was then removed, and the catheter was pulled back into the vessel so the side holes lay in the lumen. Thus a 5 mm length of catheter was introduced into the artery without temporary occlusion of the vessel. This provided a site for the injection of indicator for flow studies. For determination of myocardial blood flow ⁸⁵Kr dissolved in 0.3 to 0.5 ml of saline (0.85 gm per cent) was rapidly injected through the catheter into the internal mammary artery. The dead space of the

catheter was immediately flushed with 0.2 to 0.4 ml of saline.

A two by two inch sodium iodide crystal coupled to a digital counter and recorder was placed over the myocardium. The ⁸⁵Kr¹¹ activity was monitored for 2 minutes after the intra-arterial injection. The recorded radioactivity (minus background) was plotted on semilogarithmic paper. A straight line was drawn by inspection through the points obtained in the first 2 minutes after injection, and the slope (k) was calculated from the equation:

$$K = \frac{\log c_1 - \log c_2}{0.4343(T_2 - T_1)}$$

where C₁ and C₂ are counts per minute at time T₁ and T₂ respectively. Blood flow (in ml/100 g/min) was calculated from the equation:

$$F = \frac{100 \cdot k \cdot y}{P}$$

where F = blood flow in ml/100 g/min, y = partition coefficient for ⁸⁵Kr (myocardium/blood) P = specific gravity of myocardium¹¹. The specific gravity was assumed to be 1.05, and the partition coefficient was assumed to be 1.00.²² Two to 5 serial flow determinations were performed in each animal and a mean value was calculated. The animals were then sacrificed.

The hearts from 3 animals were filled with cotton and then were injected with vinyl acetate through the implanted artery. Twenty-four hours later the hearts were placed in a solution of potassium-hydroxide to dissolve all the tissue, leaving a cast of the vascular system. In another five animals Hypaque® was injected into the internal mammary implant of the excised hearts and roentgenograms were made. Then in all animals tissues were sampled, sectioned, and stained with hematoxylin and eosin, and histological studies were carried out.

RESULTS

Survival: Six of the 17 dogs (including 4 with double ring and 2 with single ring) died before hemodynamic studies could be done. These animals (35 per cent) died suddenly within 12-28 days after the first stage of the operation. At autopsy the cause of death in each animal was found to be due to myocardial infarction caused by complete occlusion of the branches of the left coronary at the site of the placement of the ameroid constructor. The remaining 11 animals, including 5 double-

(Continued on Next Page)

TABLE 1
Survival Time and Myocardial Blood Flow in Animals After internal Mammary Implantation and Ameroid Ring Occlusion of Coronary Artery

| | Experiment No. | Time of Study After Implantation | Internal Mammary Flow ml/100 g/min | | | | | Average Flow |
|---------------|----------------|----------------------------------|---------------------------------------|-----|-----|-----|----|-----------------------|
| Descending | 10 | 30 weeks | 60 | 67 | 61 | 61 | — | 62 |
| Branch of | 12 | 24 weeks | 138 | 130 | 120 | 113 | — | 125 |
| Left Coronary | 14 | 24 weeks | 37 | 47 | 46 | 32 | — | 40.5 |
| Artery | 15 | 22 weeks | 36 | 34 | — | — | — | 35 |
| | 17 | 30 weeks | 45 | 53 | — | — | — | 49 |
| | | | | | | | | mean & s.d. 62.3±36.5 |
| Descending | 2 | 34 weeks | 104 | 93 | 88 | 88 | 90 | 92.5 |
| and | 6 | 32 weeks | 74 | 63 | 82 | 82 | — | 75 |
| Circumflex | 7 | 42 weeks | 34 | 34 | 28 | 85 | — | 45 |
| Branch of | 8 | 35 weeks | 95 | 89 | 80 | 85 | — | 87 |
| Left Coronary | | | | | | | | |
| Artery | | | | | | | | |
| | | | | | | | | mean & s.d. 60.1±34.7 |

ring and 6 single ring constrictions, survived until the time selected for hemodynamic studies 22 to 42 weeks after stage 1.

Patency of the implanted artery: In ten of 11 animals who had hemodynamic studies the implanted artery was found to be patent. One artery was occluded except for a small recanalized lumen. In all animals the segments of the coronary arteries under the ameroids were found occluded at surgery.

Hemodynamic studies: Hemodynamic observations were carried out in nine animals. Of the remaining two surviving animals, one developed technical problems, and the other was found to have an obliterated internal mammary artery. Measurements of blood flow in the internal mammary artery are presented in Table 1.

The mean myocardial blood flows for the double ring animals was 60.1 ± 34.7 ml/100 g/min, and the mean of the single ring group was 62.3 ± 35.5 ml/100 g/min. These values are not significantly different.

Post-mortem contrast injection studies: Roentgenographic examination following the injection of contrast medium through implanted arteries in 11 animals demonstrated the following:

A: In the 6 animals which died 12 to 28 days after the first stage procedure, one implanted artery was occluded, and the others showed development of anastomatic branches. Figure 1 shows the development of anastomatic branches 19 days after a stage I procedure.

B: Four of the 5 animals sacrificed after hemodynamic studies (22 to 42 weeks after implantation) showed roentgenographic evidence of development of anastomatic branches.

Histologic studies: Histological examination was carried out in these 5 animals. In these 4 animals the implanted artery was patent and communicated with the capillaries; there was a minimum amount of fibrosis in the myocardium (Figure 3). In the remaining animal, the lumen was almost occluded (Figure 4) with slight recanalization and moderate amounts of fibrosis of the myocardium.

Post-mortem vinyl acetate injection studies: The vinyl acetate injection through the implanted artery in three animals also indicated the appearance of collateral anastomosis between the implanted artery and coronary system (Figure 2).

DISCUSSION

Experimental criteria for evaluating the Vineburg procedure include measurement of the blood flow through the implanted internal mammary artery. Effectiveness may be demonstrated by observing blood flow through the implant comparable in magnitude to the myocardial blood flow through the heart prior to both the induction of ischemia and implantation of the internal mammary artery. The pooled results from the present studies show a mean blood flow through the implanted internal mammary artery to the myocardium of 66.1 ± 31.6 ml/100 g/min in animals with occlusion of one or two branches of the left coronary artery. This compares well with measurements of normal myocardial blood flow in animals made by a similar technique by Herd and associates¹¹ of 47.3 ± 3.1 ml per minute. Provan and associates¹² reported blood flow with an electromagnetic flow meter was 49 ml per minute in a chronically implanted internal mammary.

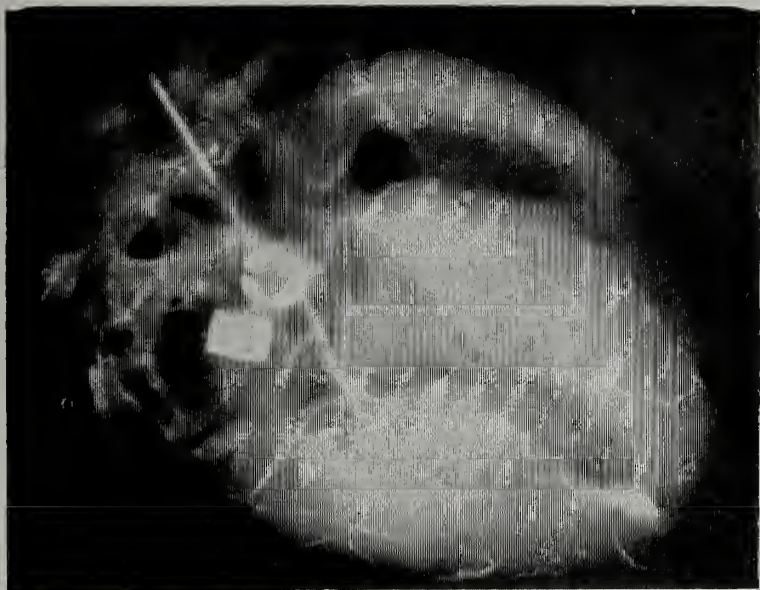


Figure 1

In experiment No. 1, the animal died suddenly 19 days after the first stage procedure. Contrast medium injected through the implanted artery shows development of anastomatic branches. The two ameroid rings appears as well-defined radio-opaque areas.

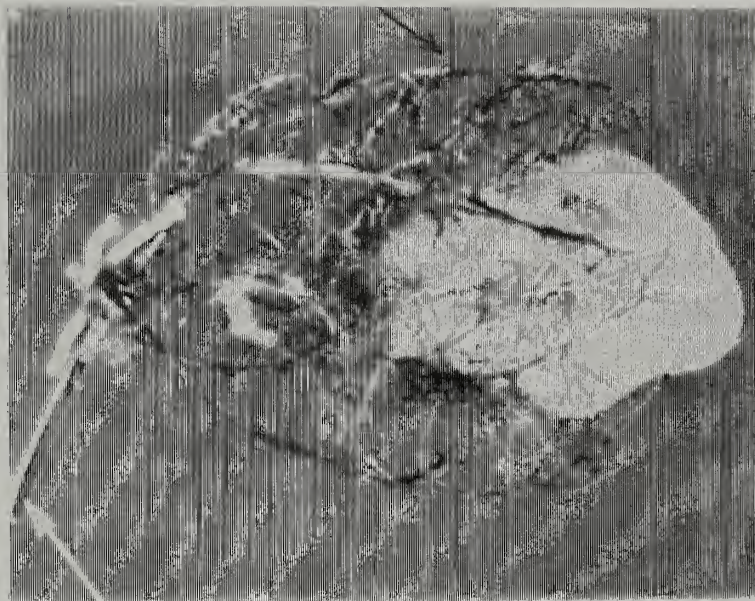


Figure 2

Experiment No. 8. Thirty-four weeks after implantation, injection of vinyl acetate through the internal mammary artery showed excellent communication between the implant and the coronary system. Cotton ball used to distend the ventricles prior to acetate injections lies inside the cast. The arrows show implanted internal mammary artery.

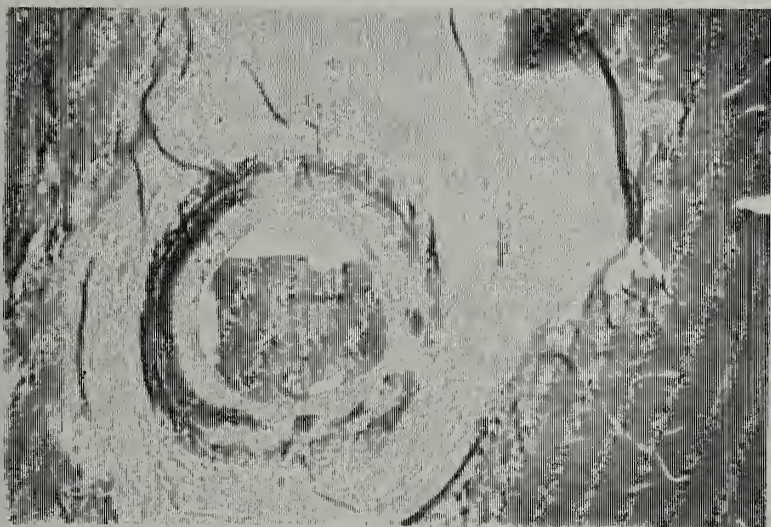


Figure 3

Experiment No. 12. Twenty-four weeks after implantation. The lumen was patent and filled with radio-opaque substance and connection with capillaries. The myocardium showed much less fibrosis than in Figure 4.

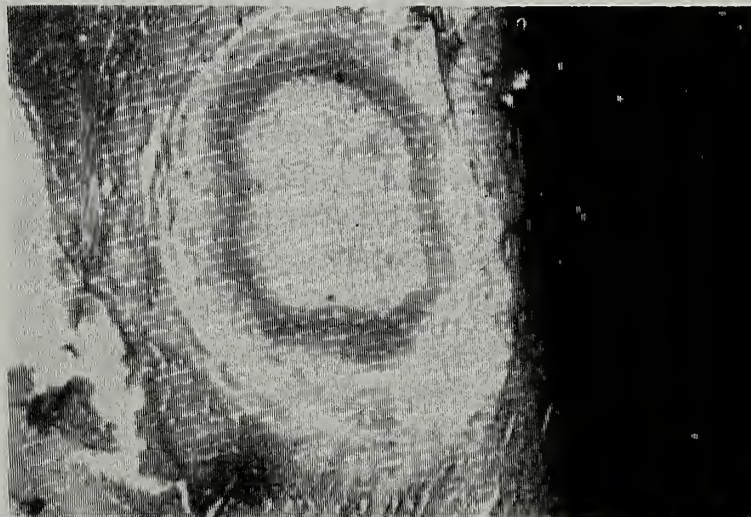


Figure 4

Experiment No. 9. Twenty-seven weeks after implantation, histological section indicated that the artery was occluded, except for a small recanalization. Moderate degree of fibrosis of the myocardium was noted.

The present study fails to show a correlation between the degree of ischemia and the blood flow through the internal mammary artery at the time of measurement. In those animals in which ameroid constrictors were placed both on the left anterior descending as well as the left circumflex coronary branch, the blood flow was 60.1 ± 34.7 ml per minute. In those animals in which an ameroid constrictor was placed only on the left anterior descending coronary artery, the blood flow was 62.3 ± 36.5 ml per minute. These measurements probably indicate a major portion of the myocardial blood flow, as branches under the ameroid constrictors were occluded in every case.

The radioactive technique is well suited for the measurement of blood flow in this type of experi-

ment. Our interest here is in nutritive blood flow to the myocardium, not blood flow through arteriovenous anastomatic channels. Electromagnetic flowmeter techniques measure both types of blood flow. Because the ^{86}Kr technique requires equilibration of the inert gas at the capillary level, it may be a better measure of nutritive blood flow.

The Vineburg procedure can be considered effective only if it increases the survival rate of animals in which significant myocardial ischemia is present. Although a parallel control source was not studied in the present experiments, the mortality rate of 35 per cent is lower than that reported by Vineburg (80 per cent)², in which the ischemia was induced by ameroid constrictors without internal mammary implants.

(Concluded on Page 480)

Some Thoughts On Therapeutic Abortion

Psychiatrist Is In Unique Position To Evaluate Motivations, Personal And Social Factors, And Future Outlook

By Anthony P. Chatowsky, M.D.

Abortion of any type, natural and spontaneous or artificially induced, is a complex and often emotionally charged subject. It involves questions concerning the rights of the mother, the rights of the unborn, the rights of society, and the personal meanings and consequences to those concerned. Involved is the question of when does human life begin and under what conditions may it be destroyed.

An induced abortion involves more than just a pregnant woman and someone to abort her. It involves the fetus which has the potential to be born. It is the concern of obstetricians, general practitioners, psychiatrists, hospital personnel, clergymen, lawyers, judges, spouses, parents, and various groups such as public health personnel. It is influenced by the legal statutes that regulate under what conditions it may be done which involves the hospital committees and law enforcement agencies. Surrounding all this are the preva-

lent attitudes and moral concerns of society. A review of the literature on the current therapeutic abortion situation reveals many differences of opinion and opposing camps in all the involved groups. It is also apparent from the literature that the views expressed reflect the ethics and personal bias of the people concerned. This paper will deal mainly with the involvement of psychiatry in the abortion issue, and, as in the case with others, my own personal bias will be expressed. Throughout the rest of the paper the term abortion as used will refer only to artificially induced abortion in early pregnancy by a qualified physician. This is usually termed therapeutic abortion. However, there is concern and question as to its therapeutic value.

Most states allow an abortion when the pregnancy is judged to be a threat to the mother's life. There is a trend towards permitting abortion on medical grounds when there is substantial evidence that the health or life of the mother is threatened, that the infant will be deformed or mentally defective, or that the pregnancy resulted from rape or incest. There is also a trend toward

ANTHONY P. CHATOWSKY, M.D., *Practicing Psychiatrist in East Greenwich, Rhode Island.*

Read in slightly different form before the Kansas Psychiatric Society in April 1969.

making abortion available upon the demand of the conceived woman for any reason. I shall address my comments to each of these stated indications for abortion.

When there is substantial medical evidence that the health or life of the mother is threatened.

Since the obstetrical, surgical, and internal medical reasons for abortion are few in number and are decreasing, the mental health reasons will become the more significant, and a greater number of abortions will be done for mental health purposes. In the entire state of Colorado, for a period from May 1967 through January 1968, 224 therapeutic abortions were performed of which 151 or 67 per cent were for psychiatric reasons.¹ In California during the year following their new liberal abortion law 86 per cent of recorded therapeutic abortions were done for alleged mental health reasons.² It has been observed that as the physical indications have decreased the mental health indications have increased. How is this explained and how are the mental health indications arrived at to justify abortion?

At our present state of psychiatric knowledge, the criteria for evaluating prognosis are poorly defined. Psychiatric cure is difficult to define, and discharge rates from mental hospitals fluctuate as the times and treatment philosophies change. Prognosis in psychiatry more than in any of the medical specialties is partially based on the psychiatrist's own views as to what psychiatric improvement is and his own personal need to have his patients get better. With our present lack of knowledge and limited studies on whether abortion for psychiatric reasons is therapeutic, it would appear to be an error for legislators and for patients to look to psychiatrists for a definite answer. For the psychiatrist to put himself in the role of predicting whether an abortion will help a nervous person or not in many cases forces him into a guessing game as to the outcome, a guessing game which involves the destruction of a potential life and an existing mental problem which may not be improved.

Due to the differences in the caliber of the psychiatric teaching centers, the various, and at times opposing schools of psychiatric thought, and a wide range of competency in the physicians who are called psychiatrists, psychiatry seems unready to settle the abortion issue. Furthermore, there are marked differences among psychiatrists in their philosophies of life, and to complicate matters

there are untrained physicians working as staff psychiatrists in mental hospitals and out-patient clinics. It seems unreasonable for these physicians to be expected to make the decision as to whether abortion is indicated in the treatment of their patients. Who are the psychiatrists that should make this decision, the psychiatric resident in his training, the hospital staff psychiatrist with no formal psychiatric training, the hospital staff psychiatrist with approved training, the board certified psychiatrist, the psychoanalyst, the psychiatrist in private practice, or the community psychiatrist? What are their guiding criteria?

Another factor is that many doctors do not like to have their ability to cure a patient frustrated. When a pregnant patient insults a psychiatrist's skill by not recovering from her illness, might he not try any method as a last resort? How often has electro-shock treatment been used on a patient because everything else failed? Even more pressure is applied when the patient threatens suicide if nothing is done.

The changing abortion legislation favors a woman who is pregnant and desires an abortion for any number of reasons; for example, not wanting to care for any more children, fear of the pregnancy, concern over the finances involved, and conception not by her husband. Should this woman seek a psychiatrist to help her and should he consent to help her, he then puts himself in a difficult situation. He has to say that it is not because of the patient's desire to be rid of an unwanted pregnancy, that it is not because of his desire to help her, or that it is not because of the fee received, but that it is because the pregnancy is a threat to her mental health that an abortion should be done. He then has to justify his decision medically to make it acceptable to a hospital committee, and for a necessary period of time the patient is claimed to be psychotic or suicidal. Who is able to question the medical judgment or the ethics in such cases? A paper in the American Journal of Psychiatry states :

"In a study of patients aborted at Mt. Sinai Hospital, it was clear that although every patient aborted for psychiatric reasons was described as being suicidal, many were not even being treated by a psychiatrist at the time abortion was sought. Even fewer were still being treated three to six months after the abortions. This is evidence for the thesis that psychiatric illness is being exag-

(Continued on Next Page)

gerated to win approval by the hospital committee."³

It is open to serious question if artificial interference of the psychologically and biologically intimate mother-fetus unit will not have disturbing psychological effects on the mother. It seems even more probable if it happens to women who are already psychologically unstable. There has not, however, been sufficient study of this problem to make a definite statement one way or the other. Perhaps the most thorough study is the review of the literature on the psychiatric sequelae of abortion from 1935 to 1964 by Simon and Senturia,⁴ in which they conclude:

1. "There is some agreement that women with diagnosed psychiatric illness prior to abortion continue to have difficulty following the abortion."
2. "There appears to be a lack of conclusive data about the effects of therapeutic abortion."

There is a need for thorough unbiased studies on the long range effect of abortion on emotionally disturbed women and the results made available and understood before any more liberalizing laws are passed. Also, the active termination of one life which may develop normally because of the wish to improve another life which is mentally ill or nervous may, after more careful thought and experience, turn out to be unsound medicine and may even influence an increase in the proportion of mentally ill and nervous people.

The threat of suicide is the major given psychiatric indication for abortion. However, all studies show that suicide is extremely rare in pregnancy. In a 15 year maternal mortality study in Minnesota, there were 14 female suicides associated with pregnancy, 10 occurring post partum, for 1,232,500 live births. Two patients were diagnosed as schizophrenic and 12 as psychotic depression, and only four were under psychiatric care. There were no suicides in any unmarried pregnant women.⁵

Several articles conclude that there are no psychiatric indications for abortion. It appears that we have fair to good treatment available for most psychiatric illnesses, and when a woman becomes disturbed during her pregnancy or in the post partum period we should make every effort to provide proper treatment and help her through the crisis. We should work with time and not make a hasty decision as many mothers' attitudes toward

their infants change throughout their pregnancies.

That the infant will be deformed or mentally defective.

If a mother-to-be develops German measles during her first three months of pregnancy there is an estimated 15 or 20 per cent^{6,7} chance of an infant being born with some abnormality. If abortion is performed during the same period there is a high probability of a normal baby being prevented.

It is axiomatic in medicine that one should make every attempt to know what one is treating, or better to make a diagnosis before treatment is initiated. Destroying a normal fetus early in pregnancy in the hope that an abnormal fetus is being destroyed does not constitute good medicine. At birth a definite diagnosis could be made so that only the abnormal infants need be treated. It would then be a more knowledgeable situation for the physician and for the parents and would certainly be fairer to those unfortunate individuals who would have been normal.

To abort a mother because her potential child may be defective is similar to the primitive practice of drowning, burying, or leaving a blemished newborn to die, but differs in that it occurs before birth, is scientifically sanctioned, involves more errors of diagnosis and the destruction of more potentially normal individuals.

Since abortion laws affect the lives of the disabled, it would be important and necessary to hear their views on the subject. It would be an informative survey to ask people born with an incapacitating physical deformity if they would have preferred to have been aborted, so that they and their parents would not have had to suffer so much in our society. Another survey should be made of their parents' views.

Since physicians are going to prescribe abortion for the potentially deformed and mentally defective infant, presumably to spare it and its family future problems, shouldn't there be some knowledge of what these problems are and how the disabled and defective individual and his family experience them? Few medical schools, internships, or psychiatric residencies teach this.

Physically deformed and mentally retarded people are often frightening, especially when one first meets them. Part of this is due to the fact that they threaten our wish for perfection and success and defy our concepts of normality and convention. These persons are often considered un-

sightly and dangerous, blemishes to be kept out of society and to be put in an institution out in the country. Of course, the trend towards liberalizing abortion favors the wish to be rid of these individuals, which placement in an institution often symbolizes. This is similar to a past movement which, unfortunately, still has its grips on our society and with which psychiatry is struggling; that is, the fear of the mentally ill who were also considered incurable and dangerous and who were also hidden in institutions so that society could pretend they did not exist. It appears that, unless the movement to destroy the potentially deformed or defective victim by abortion is kept well controlled by knowledge, understanding of its ethical aspects, frank discussion, and careful decision, it could become a problem. It is linked to the wish for normality and perfection which under just scientific supervision could lead to destruction of all types of socially determined inferiors.

There is increasing evidence showing that a significant percentage of mental retardation is caused by environmental factors; for example, poor nutrition, lack of education, and emotional deprivation (lack of sufficient love). Already some voices are speaking out for abortion for social reasons, and it is conceivable that in the future social scientists will decide that pregnant women in certain environments should be aborted. What pressure will this trend put on a mother in such an environment who becomes pregnant, if the authorities say the child will be retarded by his surroundings and should be aborted?

Or that the pregnancy resulted from rape or incest.

Much anger is generated over the thought of our wives, daughters, sisters, and girl friends being molested and raped. It swells the emotion in even the most complacent, and many a revengeful act has shed the blood of the molester or the suspected molester. Even more intense emotions are involved when the molester is of a different race or background. Under a civilized legal system the victim and her husband, father, or boy friend cannot attack and destroy the rapist; they must wait for the processes of law and justice to be done. However, they can turn their frustrated anger towards the products of conception.

While they cannot destroy the rapist, they can destroy the fetus which he helped to be and which contains his "terrible genes." How often will the

destruction of the potential child who is developing out of a rape or illegitimate pregnancy be done for revenge? Added to this is the tragedy that the fetus is innocent. He did not commit the crime, and yet it is his life that ends.

One of the stated reasons for aborting a pregnancy due to an illegitimate conception is the assumption that the child will be unwanted and embarrassed by knowledge of his beginnings. As with the physically deformed, might it be a more humane and democratic approach to wait until these individuals reach an age when they can speak for themselves and then let them make the decision as to whether they should be removed from our society? Before we pass laws affecting a segment of our society, such as the children born of rape or out of wedlock represent, we should know the views of the subjects. Once again, there is insufficient study and knowledge in this matter. What is the long range adjustment of children who were born of a rape and raised by their parent or by foster parents? What is the long range adjustment and opinions of these parents? Do their attitudes change as the child grows?

Rape is a difficult act to judge; as, for example, the teenager who just happened to linger near the bushes by the ball park after dark and upon finding out she was pregnant claimed she was raped by several boys. Usually, intercourse below the age of 16, even with consent, is considered to be statutory rape. Will the liberal abortion laws make it possible for such a young teenager to be aborted? If so, this brings up the question of the long range psychological effect of artificial disruption of the mother-fetus unit when it occurs in adolescence. Will such a major event influence any developing attitudes toward the value of human life? Will liberal abortion be interpreted by the young teenager, both girls and boys, as "Don't sweat it, there is no problem or responsibility, just a couple of days in the hospital and it's all over"?

What attitudes toward life and people will be influenced by a social attitude of "Don't sweat it, we just destroy your potential baby and your problem is over"? Will the problem be over, or will a deep guilt and resentment develop later on in the life of these teenagers? These are thoughts which indicate a need for further study into this important subject, hopefully, to increase and clarify our knowledge before we pass laws which effect future generations.

(Continued on Next Page)

Much of the discussion on rape can apply to incest. To have a teenager aborted because of a pregnancy due to incestuous relations certainly emphasizes to her how terrible an act she has committed, could emphasize how bad or evil the developing life within her womb is, and could aggravate a life-long guilt. There are many superstitions about children born of incest, such as that they inherit bad genes or that they will be mentally retarded, which make it easier for society to destroy such a fetus. Once again the fetus is innocent of the act. Yet it is he who suffers the feelings of an abhorrent society and loses his life to the curette.

Although the liberal abortion laws are said to be for the mother's best interest, on further analysis they represent more a wish to be rid of an unborn fetus, which is socially unacceptable for various reasons. This is substantiated by the fact that there are very few situations where the pregnancy is a true danger to the life of the mother. But why the wish to be rid of the unwanted fetus which actually is a wish to be rid of the human being the fetus would develop into, and why the changing attitudes and laws concerning abortion at this time? The answers are not all known, but there are some possible reasons.

Throughout his history man has always needed a scapegoat and a persecutor towards whom he can release his anger and to help him neutralize his own guilt and feelings of inadequacy. Might not this group of disabled, retarded, unwanted, and illegitimate unboras be the scapegoats for a society that fears imperfection, that despairs over loss of ability and physical beauty, that is oversensitive to what others think, and that dreads social inadequacy? These selected unborn should not become the release for frustration by older generations because of changing social attitudes and because of resentment against racial integration and interracial relationships. These selected unborn should not become the victims of a growing social panic over the increasing population, or "population explosion" as it is termed. Already some voices feel that this is a justification for liberal abortions. These selected unborn should not be the target of displaced hate caused by disgusting acts of violence and crime such as rape or incest, or be exterminated because they are feared as potential criminals. Lastly, these selected unborn should not absorb the guilt and take the blame for poverty and suffering due to social con-

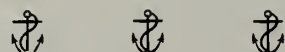
ditions, and be used as a stopgap method for attempting to alleviate such conditions. If abortion is removed from the supervision and responsibility of the medical, legal, and religious professions and given over to the demands of society, then surely all of the above reasons will be supported and strengthened.

CONCLUSIONS

The psychiatrist is directly involved with the abortion question. He is in a unique position to evaluate the conscious and unconscious motivations involved, to look at the personal and social factors, and to consider the future for both mother and child. His counsel should be one of several, should not be influenced by coercion or manipulation, and should be based on his medical and ethical judgment.

REFERENCES

- ¹Heller A. Whittington HG: The Colorado story: Denver General Hospital experience with the change in the law on therapeutic abortion. **Amer J Psychiat** 125:809-824, Dec 68
- ²Pfeiffer E: Psychiatric indications or psychiatric justification of therapeutic abortion? **Arch Gen Psychiatry** 23:402-407, Nov 70
- ³Peck A: Therapeutic abortion: patients, doctors and society. **Amer J Psychiat** 125:797-804, Dec 68
- ⁴Simon NM, Senturia AG: Psychiatric sequelae of abortion; review of the literature, 1935-1964. **Arch Gen Psychiatry** 15:378-389, Oct 66
- ⁵Barno M: Criminal abortion — deaths and suicides in pregnancy in Minnesota, 1950-1964. **Minn Med** 50:11-16, Jan 67
- ⁶Sallomi SJ: Rubella in pregnancy; a review of prospective studies from the literature. **Obstet Gynec** 27:252-256, Feb 66
- ⁷Rendle-Short J: Maternal rubella; the practical management of a case. **Lancet** 2:373-376, 15 Aug 64
- ⁸Abraham HC: New aspects of the psycho-pathology of patients presenting for termination of pregnancy (abortion on psychiatric grounds). Presented at the Topeka Psychoanalytic Association Open Lecture, October, 1968
- ⁹Lauth EJ Jr: Liberal abortion laws; the antithesis of the practice of medicine. **J Florida Med Ass** 54:916-920, Sep 67
- ¹⁰Tietze C: Therapeutic abortions in the United States. **Amer J Obstet Gynec** 101:784-787, 15 Jul 68
- ¹¹Vanderpool JP, White RB: Psychiatry and the abortion problem. **Tex Med** 64:48-51, Jan 68



ONE SENTENCE ESSAY

One surgeon to another: "It was a tough operation — ten minutes in the operating room and eight hours filling out the insurance forms."

... Anon.

Isaac Kaminer, M.D. 1834-1901 Physician, Poet, And Satirist

*Thou Shalt Love Thy People With
All Thy Heart, And All Thy Soul,
And All Thy Might*

By Harry A. Savitz, M.D.

In the Nineteenth Century the Jew in Czarist Russia was a second class citizen, but a first class student. He was ever devoted to study, eager to learn and to search for knowledge. He was anxious to obtain a profession and to carve a niche for himself in this world. Furthermore membership in one of the learned professions would lubricate the wheels of his life and make living under strained conditions a little easier. So the Ghetto rang with a clamor for knowledge. There was practically no illiteracy among the Jews of that time; a child of five years began the study of the Hebrew alphabet; and, as soon as he mastered it and began to read, he started the study of the Bible. This was followed by Talmud, that intricate body of Jewish civil and religious laws, because the highest ambition of the Jewish parent of that era was to see his son become a rabbi, a teacher and preacher in Israel. Jewish studies had priority over all the other professions, including law and medicine, although many of the younger generation, in spite of gentle pressure, thought otherwise and preferred other paths. The life of Kaminer illustrates these tendencies very well.

HARRY A. SAVITZ, M.D., of Brookline, Massachusetts; Physician-in-Chief Emeritus of the Hebrew Rehabilitation Center.

Isaac Kaminer was born in 1834 in a small town near Zhitomir. His parents engaged a Hebrew teacher to instruct him in the usual exclusively religious education. This pupil had a quick mind and absorbed everything he was taught. His parents were hopeful that their expectations would be fulfilled and that their son would become a rabbi. But the boy's teacher was a sophisticated young man who introduced secular literature to his young pupil. The boy was fascinated with this new knowledge. His parents noticed that their son was straying from the rigid path that they had prescribed for him. They felt that by arranging an early marriage for him — "putting millstones around his neck" — he would be kept on the straight path. This was accomplished when he was scarcely 16 years old. But, contrary to their hopes, Kaminer's young wife was an asset, instead of a hindrance, and she encouraged him in his wider range of study. Shortly after his wedding, he left his wife and journeyed to Vilna where a number of "Maskilim" — men of enlightenment — welcomed him and stimulated him to pursue his secular studies. During this time his wife gave birth to a daughter, and his father-in-law besieged him with letters to return to his wife and child. He himself longed for his family and agreed to return

(Continued on Next Page)



Isaac Kaminer, M.D., 1834-1901

on condition that he would be free to pursue his studies.

He supported his family by tutoring and at the same time studying to prepare himself for teaching in a government school. On the 27th of January, 1854, at the age of 20, he qualified as a teacher of Hebrew studies in the Rabbinical Seminary of Zhitomir, where he taught for a couple of years. In 1857 he gave up his position, left his wife and five daughters, and went to Kiev. He applied to the University there, and passed the entrance examinations with flying colors. It was here that he became acquainted with one of the greatest physicians of his time, Dr. Nicolai Ivanovich Pirogov (1810-1881). This teacher and humanitarian was impressed with his student's examination in Mathematics and advised him to enroll in the department of theoretical physics, as he then did. He was still supporting himself and his family by tutoring, and at the same time he continued his literary work and translations. Being the father of five daughters he realized that, for a Jew in Czarist Russia, the only way to support his family properly was to study medicine. In spite of his grave economic condition he was determined to pursue the study of medicine, and for

four years he studied to that end, often going to bed hungry. In 1885 he achieved his goal and received his M.D. degree. In the meantime a son was born, and at 30 years of age he was the father of six children. As a practicing physician his economic condition improved, and as a perpetual student he continued his medical studies. For 15 years he was assistant to Professor von Mehring, (who with Professor Oskar Minkovsky produced diabetes in a dog by excision of the pancreas in 1889). This association with Mehring brought popularity to Kaminer, and his services were much sought after. Having suffered poverty himself, he was devoted to the poor. His ability as a physician and his nobility as a man made him a beloved physician.

About 1875 Doctor Kaminer was appointed physician to the Monasterische, government of Chernigov. His duties included travelling from village to village to visit the sick, and he was respected everywhere for his skill and knowledge. In spite of a busy practice he found time to write, and he published satirical poems and feullitons. He was under the influence of Russian radical literature and tended towards Socialism. In his writings he attacked the people of wealth and spoke out against social injustice in general. In one of his poems he says:

"The rich man's horse is well fed
While a poor man's son is starving for
bread."

A few years later he was made a member of a commission to investigate the conditions of the Russian Jews, but his impassioned defense of his coreligionists displeased the officials, and he was ordered back to the government of Kiev. In spite of this experience, as a professional man of repute and as a cultured Jew, he continued to defend his people before the government officials by word of mouth and with his pen. He witnessed the pitiable condition of his brethren in Czarist Russia and, as he expressed it, "Blood and fire and pillows of smoke — this is the whole history of the Jews; the rest is commentary — study it." He could not see any chance of improvement for the Jews under that government, and he prophetically foresaw that Socialism was no key to human freedom and happiness. Thus it was that in his later years he became an enthusiastic Zionist and protagonist of agricultural labor in Palestine. In his new enthusiasm he composed several Zionist songs in

(Concluded on Page 479)

Editorials

GOOD HEALTH IS MORE THAN MEDICAL CARE

The recent funding by the Office of Economic Opportunity of approximately two millions dollars to the Providence Health Centers evoked much favorable press comment locally on what is characterized as a "break through" in the new system of delivery of health care for the poor.

From the time the neighborhood health center concept was initiated the Providence Medical Association has expressed a sincere and willing interest to aid in the development of any project that would resolve in so far as is possible the lack of health care for what has been recognized as the most vulnerable section of the city — the South Providence area. The Association stated that "it strongly feels that there is need to develop a sound and comprehensive program of health care for the *poor*, and we are prepared to the best of our ability to achieve such a goal."

The Centers have been in operation for three years. A health advisory council for them is yet to be named. The city medical association has one member on the 30-member board of directors.

From an initial target of 9,300 persons, of whom over 4,600 were reported to be beneficiaries of state public assistance, the new concept for which generous funding was awarded by Washington, aims for 20,000 additional subscribers within another year, and then on to a "long term goal to provide medical care to a population subgroup of the city composed of all the city's low income residents, *together with a substantial number of middle income and even some high income residents of the city.*" (italics added)

Now we are talking of something other than really doing an adequate job in caring for the sick poor. To make the group plan economically feasible, the planners are aiming to take care of one third of the city's population, and since the middle income and high income patients can well afford to supplement their needs, they will be the real beneficiaries of the program, not the poor.

We believe that neighborhood centers in areas where the need is great could bring better health care to the poor. We believe that every available resource, financial and otherwise, should be directed solely to the problems of the poor. And their problems are many. Programs to aid the middle income and high income population should not be built on and added to the network that seeks to bring the poor into a better way of life.

In a democratic society the pluralistic approach is accepted as a method to meet the needs of all the people. We believe in many programs and new approaches to solve some of our community problems, not just the health issue.

But in the hubbub over the sizable award to the Health Centers, and the rosy future that is glibly predicted for them, we are all overlooking the basic fact that pouring money, doctors, nurses, and health personnel into areas such as South Providence will not necessarily eliminate poor health in that or any similar area of the city.

The problem is a sociological one, and until better housing, employment, education (general as well as health), and community pride that sets high examples and develops good habits among the residents, are achieved, all the best doctors in the world could march into the areas with the best of intentions and not attain the improvement that we really seek.

The effect of habits was succinctly made by the Sun Valley (Idaho) Forum on National Health late in June, when it stated: "Millions of Americans would benefit more from changing their dietary habits, losing weight, exercising, stopping cigarette smoking, and cutting down or ending their consumption of alcohol and other drugs than from having more physicians and more hospitals available to treat them after their bad habits laid them low."

The most bandied word in the health center or group health discussion is that of "preventive" care. The presumption that people will willingly and enthusiastically go to health centers when they are enjoying what they consider good health is certainly not valid.

Real preventive health care would be an all out community attack on poverty and ignorance to improve the situation regarding infant and maternal mortality, on attacks on the needless and continuing highway fatalities and disabilities, facing up to effective controls, especially on the alcoholic driver, an attack on air, water and land pollution, and an attack on overweight, and cigarette smoking.

It certainly is time the people of this country recognize that good health is an individual responsibility about which each person can do something.

INNER CITY HEALTH

The previous editorial, in emphasizing that good health is more than just medical care, points to South Providence as the most vulnerable section of greater Providence as regards the impact of poverty on health. The most recent annual assessment by the Rhode Island Department of Health of health conditions in the various census tracts bears this out. In virtually every category the health status of the sixteen census tracts comprising the inner city is below that of the rest of the city, and this is particularly marked in the four South Providence tracts designated for Model City development.

According to the 1970 census the inner city has 66,600 residents out of a total of 179,200 for the city as a whole. There are 15,000 in the Model City area.

The inner city of Providence has higher death rates from all causes and a higher infant mortality. It has proportionately more low-birth-weight infants, illegitimate births, tuberculosis, venereal disease, cancer, heart disease, diabetes, hepatitis, measles, influenza and pneumonia, emphysema, cirrhosis of the liver, congenital malformations, suicides, and homicides.

For all of Rhode Island the death rate for all causes is 10 per 1,000, which is the same as for all of the United States. The rate for Providence, however, is 14; 16 for the inner city; and 19 for the Model City area. The Rhode Island infant mortality rate is 20 per 1,000 live births, slightly lower than the national average. For Providence it is 25 per 1,000, 32 for the inner city, and 38 for the Model City tracts.

The birth rate in these areas is also high: 16 births per 1,000 population for the whole of Rhode Island, 18 for Providence, 21 for the inner city, and 26 for the Model City region. Other data may be tabulated as follows:

| | Rhode Island as a whole | Providence as a whole | Inner City | Model City |
|--|----------------------------|--------------------------|---------------|----------------|
| Low Birth-Weight Babies (per 1000 live births) | 79 | 93 | 123 | 184 |
| Illegitimacy (per 1000 live births) | 66 | 138 | 224 | 358 |
| Venereal Disease Cases (per 100M population) | 132 | 406 | 803 | 1970 |
| Tuberculosis (per 100M population) | 9.82 | 20 | 42 | 80 |
| Deaths from Heart Disease (per 100M population) | 433 | 602 | 702 | 781 |
| Deaths from Cancer (per 100M population) | 195 | 247 | 251 | 301 |
| Deaths from Diabetes (per 100M population) | 26 | 40 | 44 | 60 |
| Infectious and Serum Hepatitis Cases (per 100M population) | 83 | 143 | 228 | 388 |
| Measles Cases (per 100M population) | 0 | 0 | 0 | 5 (9 cases) |
| Deaths from Influenza and Pneumonia (per 100M population) | 30 | 56 | 68 | 73 |
| Deaths from Emphysema (per 100M population) | 10 | 19 | 18 | 27 |
| Deaths from Cirrhosis of Liver (per 100M population) | 16 | 29 | 50 | 75 |
| Deaths from All Accidents (per 100M population) | 37 | 50 | 75 | .... |
| Motor Vehicle Deaths (per 100M population) | 16 | 16 | 20 | 20 |
| Suicide Deaths (per 100M population) | .... | 4 | 4 | 5 |
| Homicides (per 100M population) | 3 | 7 | 14 | 33 |

While such data certainly indicate the need for a higher utilization rate of medical manpower and facilities in these depressed areas, the profoundly sociological, as opposed to the medical care, basis of the sordid problem shines through clearly. Planting a few extra doctors there may possibly help, but will hardly more than scratch the surface.

REPLICATION OF A PROTOTYPE

Early in June it was announced that Rhode Island Hospital, in connection with its new 12 story ambulatory care center now taking shape, had been awarded a grant of \$800,000 for development of innovative health care procedures which "could also serve as a prototype for replication elsewhere in the country".

The planning under the federal contract will include "a review of existing services being offered throughout the state so that our new ambulatory patient center may be organized to eliminate gaps in community health services, complement existing services and be the center for the development of innovative ambulatory procedures". The public

is quite widely being led to believe that the development of ambulatory centers will save them wads of money. We wonder!

The announcement further indicates that one of the "concepts to be developed" in the model comprehensive care clinic will be to determine how multiphasic screening techniques can be integrated most effectively into the ambulatory care system. So far as the medical profession in Rhode Island can judge, the achievements of the Multiphasic Screening Center at Rhode Island Hospital, after several years of operation, have been largely indifferent, if in fact the whole business has not been downright useless. Requests for an analysis of the results of its operation have not been an-

swered. The skepticism of many doctors regarding the value of multiphasic screening cannot be overcome unless a candid review of that experience is forthcoming.

One now learns that the same leadership will be responsible for the expenditure of \$800,000 for the study and organization of a Model Clinic to lay emphasis, as it is explained in faultless bureaucratese, "on the maximum use of auxiliary personnel to conserve medical manpower, on the increased use of data processing in record keeping and patient scheduling, and on the best ways of making ambulatory services 'professionally rewarding' to the participating physicians and acceptable to patients". This certainly warrants some raising of eyebrows.

JOE SULLIVAN

It is certainly the misfortune of Rhode Island to lose to another state a man of high quality, perceptive judgment, and a keen understanding of medical health affairs; conversely, it is South Carolina's good fortune to gain the services of Joseph F. Sullivan, Senior Vice-President of Rhode Island Blue Cross and Senior Assistant Executive Director of Blue Shield.

"Joe", as he was known to his close associates in

and out of Blue Cross-Blue Shield, manifested unfailing tact and a deep sympathetic understanding of the problems of physicians in his nine years at the Rhode Island plans. His persistent kindness and wise judgment were no less admired than his intellectual qualities by those who knew him.

We wish him good luck in his new position as President of the South Carolina Blue Cross-Blue Shield Plans.

SURGERY

The world's only institution teaching ritual circumcision — The Brith Milah School conducted at Mount Sinai Hospital in New York — graduated its first class of seven on December 17, 1970.

It is said to be the first institution of its kind in 4,000 years of Jewish history. The school was established to insure that the New York Jewish Community would have available a group of men "highly qualified" to perform "this sacred task." Traditionally the training of the Mohel (ritual cir-

cumcisor) has been by an apprenticeship system.

The seven graduates in this time-honored pursuit attended classes at Mount Sinai for no less than two years and were instructed by physicians, mohels, and rabbis. Three of the seven graduates were rabbis.

Shakespeare wrote:

There's a divinity that shapes our ends,

Rough hew them how we will.

In New York they are taking no chances.



Book Reviews

LAST THINGS. A novel by C. P. Snow. New York, Charles Scribner's Sons, 1970. \$7.95.

"Vanity of vanities, all is vanity. What profit hath a man of all his labors. One generation passeth away and another generation cometh; but the earth abideth forever."

— Ecclesiastes

Last Things is the twelfth and final novel of a sequence entitled "Strangers and Brothers" begun in 1935. The series documents the fictional lives of a whole generation of middle and upper class Englishmen; but this final novel is more than the documentation of the denouement and demise of Snow's generation. It is more than a documentation of contemporary technological advancements. It is more than a documentation that in medicine electro-coagulation of detached retinae and the revival of the dead from cardiac arrest is possible. For he documents contemporary student unrest and revolution; he sympathetically probes the aspirations of the new generation. He records our changing mores with respect to divorce and sexual permissiveness, neither glorifying nor condemning. He concludes that human relationships transcend legalization. We read in *Last Things* of the unchanging character of the politician and the political process which Snow knows so well and has recorded so incisively in his *Science and Government*. In the *Education of Henry Adams* we perceive similar insights into political motivation.

Last Things concerns itself with science, morality, and religion. Snow, as Lewis Eliot, is interrogated after his cardiac arrest by a likeable and reasonable Anglican priest of Rousseau's Savoyard Vicar type. Science and religion are further developed in an incident over a memorial service held for Britain's foremost atomic scientist, Francis Getliffe, who during his lifetime, as a matter of principle, never entered the college chapel for any function. Snow, in the eulogy of Francis Getliffe by the Master of the college, declares that ethics and character transcend orthodoxy and dogma; men standing above pettiness recognize this. It would be hard not to write a good book, with C. P. Snow's qualifications, discussing in depth man's three preoccupations — politics, sex, and religion.

The argument of the novel might be abstracted to say that Snow is continuing his search for identity

which Eric Erickson rightfully considers a never-ending process. Snow's concern in this last of his novel series is for his identity as a father whose bright and capable son is caught up in the idealism of his generation. Snow sees clearly, and tells us so, that idealism and aspiration are today the same as they have been for any bright young man in any age. For identity, in the ultimate analysis, is but the harmonious integration of "self" with the most persuasive elements in one's own contemporary society.

What we have difficulty in recognizing, frequently, are the most persuasive elements of our time. Every generation reacts to its time, but would be hard put, except in retrospect, to define the forces which shaped its thinking and action. Society is never static, for there is constant death and birth, decay and regeneration. What we frequently do not recognize is the cyclic death and rebirth of social ideas. What Snow and every thinking man recognizes, however, is that every capable young man attempts to identify with these forces and to direct them to make a more perfect society. This is the "Vanity of vanities"; but so recognizing it does not for one bit reduce its significance or importance. All men are victims and products of their time. They do not create their time; they must operate within it. Yet the idealistic man with high genetic capabilities usually surfaces. Snow certainly believed this about himself and his contemporaries; he convincingly indicates that his son with perhaps even greater potentialities will distinguish himself in the changed order. He observes that youth is perhaps in a greater hurry than his forebears, and is quite capable by its "haste" to make "waste". Because of the faster movement, youth today is capable of making more tactical errors. But in his sympathetic analyses of the leaders of the next generation he recognizes worth and capabilities, and has firm confidence that they will do as well, but perhaps not a bit better than their forebears.

One persuasive element in contemporary society is the word "concern". This is not new; it is merely cyclic. In the person of Snow's stepson, Morris, he concretely develops a character of simple goodness and kindness; he indicates that such qualities have a social value which heretofore in a highly competitive, academically oriented so-

(Continued on Page 474)

For Insomnia... one capsule for the rest of the night

NOLUDAR[®] 300

(methyprylon)



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN**
Model 423

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS**

HOME TRACTION

WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

BOOK REVIEWS

(Continued from Page 472)

ciety may not have been held in great esteem. The supreme act of compassion and concern is Morris' marriage to a poor, unfortunate, genetically crippled girl. The impact that such a mating conventionally has had on an upper middle class family indoctrinated for centuries in psuedo-eugenic marriages in the Judeo-Christian tradition is a minor plot in which to discuss these changing values. This reviewer believes Snow could only be sympathetic because he has reached his sixties, and achieved that maturity of judgment to consider that "the ways of God", as Einstein has so aptly put it, "are indeed subtle". Substitute Nature for God, if you will, but the conclusions are the same. The intelligentsia of Snow's generation may have lived in too small a microcosm, and their values may have been too limited. The argument is not settled; but an argument has been raised.

Student revolution and university "take-overs" furnish another subplot. Son Charles is involved with a group of students in the seizure of the offices of the University; this results in the seizure of confidential top-secret government memoranda on biological warfare. Charles is encouraged by a very attractive, wealthy, upper-class divorcee five years Charles' senior, who has become his mistress. He comes off unscathed from both his affair and the violations of the Security Act; the resolution is done with typical Snow sophistication and credibility. In essence Snow says that youth is very apt to make errors in tactics and errors in judgment, especially with respect to the amount of permissiveness that a society will permit. Clearly Snow shows that it is society's right, obligation, and duty to protect itself if seriously threatened. It is indeed fortunate when enthusiastic youth recognizes the bounds of action and operates within those bounds to effect change. The maturity that Snow gives to the politicians who handle the inquiry in Parliament leads one wishfully to hope that all governments were in the hands of such reasonable, if fictitious, people. Snow has some knowledge of British politics; it is comforting to think that some act so wisely. Governments, like fathers, must never break the spirit of youth, but by reasonableness and firmness direct its efforts to the common good.

Snow's cardiac arrest is a device both practical and strategic. Practically, it gives him the privi-

(Continued on Page 475)

BOOK REVIEWS

(Continued from Page 474)

lege of seeing his life in retrospect, adding value judgments to the very moment of his apparent death. It permits him to document some of the scientific and medical accomplishments of his contemporary generation. Strategically, it allows him to discuss the attitudes of contemporary man with respect to life after death. From the confrontation between Snow and the Anglican priest, the reader would conclude that neither the scientists nor the clergymen in contemporary times have dogmatic or theological concepts of personal immortality. However, the matter of final judgment of one's life is handled in the finest humanist tradition. Snow questions the priest as to the matter of final judgment, if there is no God or personal immortality. The priest responds by asking Snow, in lieu of God, to be the judge of his own life, but to be as charitable with himself as his God would be. If theology is under change, and it is recorded in this novel, Snow has not overlooked the human and moral integrity of the clergy. The Anglican priest's parish is one of the poorest in London; it was here that he ministered to the poor in spirit and in substance. Concern again? The morality of Orthodox Judaism and all its corollaries are personified in the person of Azik Schiff, an immigrant Jew who achieved all worldly success in finance, politics, and society, but whose basic morality is as firm and immutable as that of an Old Testament prophet. A morality based on more than pragmatism has always existed and always will. Moral Law in the finest sense is the ethical law of man's relation to man, and to nature.

Last Things is the personal credo of C. P. Snow on the state of youth and society as he sees it today. It is a reassuring credo, since Snow, although always an optimist, has never failed to see things as they are. We witness it in *Government and Science*, *The Two Cultures*, *The State of Siege*, and in the entire novel sequence *Strangers and Brothers* begun in 1935 and concluded in 1970 in his sixty-sixth year with *Last Things*. The illusions, the hopes, the expectations, the disappointments, the anxieties, and the concerns of a whole generation of Anglo-Americans who have shaped the economic, industrial, social, political, and scientific life of the last three decades have been uniquely portrayed. There are but a few comparable works.

ROBERT V. LEWIS, M.D.

GOLD FEVER by George W. Groh. New York, William Morrow & Company, Inc. \$5.95.

A horrifying account of pestilence, starvation, sanitation, 1849 medical practice and hospital care, at the time of the California gold rush.

"In the public ward a rude shed was divided by a partition in two sections, each section measured 15 x 20 feet and contained 40 to 50 patients. Pallets were laid so close together that it was often physically impossible to step between them to tend the sufferer. The staff for each ward consisted of a single ill-paid, untrained supervisor, who distributed the rations and carried out the dead."

The cost of one ounce of quinine was \$64 (1849 value), of one drop of laudanum, \$1.

The book is well documented by an extensive bibliography.

It should make interesting reading for the present day critics of medical care, considering that what happened during the gold rush was merely 120 years ago.

F. RONCHESE, M.D.

(Continued on Next Page)

**Disability
Death
DEPRESSION
Devaluation**

Insurance

We've been buying insurance against loss from the above listed hazards for our clients all through the rising tide of inflation.

NOW, we have a special message.

BUY DEPRESSION INSURANCE, NOW —

Even if the current market slide should turn out to be temporary, you'll be happier and more secure.

If you want DEVALUATION insurance, we can buy it for you cheaper, now, than it has been for many years!

Nuf sed?

**Fourdee Planning Corporation
Fourdee Agency, Inc.
R. A. Derosier Agency**

**215 WATERMAN AVE.
East Providence, R. I. 02914
Phone (401) 438-0660**

LUXURY OFFICE SPACE

Own your own suite in a new professional office building to be built in heart of East Side this fall. Combine a lucrative TAX SHELTER, with CAPITAL APPRECIATION potential. MINIMUM CASH INVESTMENT, with attractive FINANCING. Turn-key venture includes all interior decor, air-conditioning and parking.

Serious inquiries invited from individuals or group practices requiring 1,000 sq. ft. or more.

For further information write:

PSI 25

Almeida Avenue, East Providence

Nova Scotia — ocean front and Maine woodland

certified titles: terms. For information write or call owners: Box 568, Bangor, Maine (207) 942-7588 or Box 477, Digby, Nova Scotia (902) 245-4138.

AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

HANDBOOK OF PEDIATRICS by Henry K. Silver, C. Henry Kempe, and Henry B. Bruyn. Ninth Edition. Los Altos, Lange Medical Publications, 1971. \$6.50.

This book is about the size of the Readers Digest, but it contains 700 pages. Because of the small type and the condensation of the material, it has almost as much information as a full sized textbook. There are good sections on drugs, blood chemistry, differential diagnosis, chromosomal disorders, and child development.

I can find no fault with it. The book is in the ninth edition which is evidence of its popularity and value. It will be used as a quick source of reference and is recommended for that purpose.

H. G. CALDER, M.D.



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in INDEX MEDICUS giving author (co-authors up to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.



ONE SENTENCE ESSAY

Hamlet must have been the last melancholy Dane in history.

. . . Murray J. Brown of UPI.

LEGISLATIVE REPORT

(Continued from Page 441)

Also failing to win the endorsement of the General Assembly was a proposal which would require employees of food service establishments to take an annual physical examination designed for the detection of any communicable disease or infection, and the examining physician would have had to forward to the Department of Health the results of the examination. Upon receipt of the results the Department of Health would have issued to the employee a certificate of compliance indicating that the employee is free from all communicable diseases.

Three chiropractic bills were introduced into the General Assembly during the 1971 session. Two of the measures were similar in that they would have made the definition of "medical services" to include those services rendered by a chiropractor so as to enable him to be paid by any non-profit medical service corporation. The bill was introduced in both the Senate and the House.

The third bill introduced into the House would have allowed welfare recipients to select chiropractic treatment, when any statute or regulation provides medical treatment for them. The three chiropractic measures failed to move from the original committees when they had been initially referred.

The Highway Safety Committee of the Society has advocated legislation to reduce from .10 to .08 the blood alcohol level at which a person would be presumed to be driving under the influence of intoxicating liquor. The Society this year contemplated introducing a similar bill but a state representative filed such a measure. The Society supported efforts to move the bill from committee but they were unsuccessful.

Besides introducing a measure to compensate for induced hearing loss, the Society opposed legislation which would have permitted the establishment of a State Board of Hearing Aid Dealers and Fitters to provide for their own licensing within the Department of Business Regulation. The board would have provided for the regulation of, dispensing, and fitting of hearing aids to the public and would have consisted of three hearing aid dealers and fitters, one otolaryngologist, one audiologist, and one lay member not involved in any way directly or indirectly with hearing aids, hard of hearing, audiology, medicine or state agencies. The bill provided for no requirement of medical evaluation nor treatment of active hearing disease

prior to the dispensation of hearing aids. While the bill passed the Senate, it died in the House.

Other legislation which would have regulated hearing aids by requiring a certificate of need signed by a physician before any hearing aid or similar device could be sold, failed to move from committee. Another proposal which would have regulated the sale of hearing aids by the creation of a three man licensing board within the Department of Health also failed to make any headway. The three man board would have been appointed by the Director of Public Health.

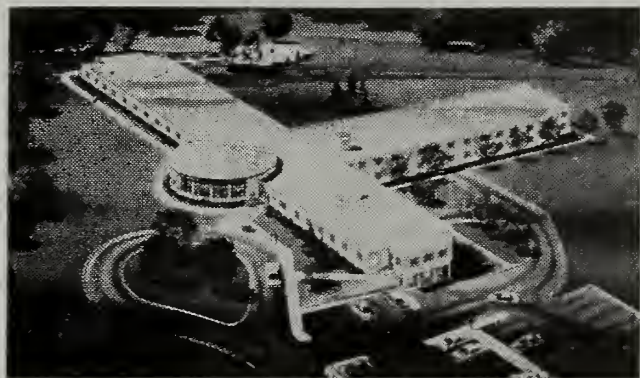
Reflecting the deep interest of the problem of drug abuse, the General Assembly was again flooded with drug control measures, the most important of which concerned the control of dangerous substances, based upon the federal statute approved by the Congress in 1970 entitled "Comprehensive Drug Abuse Prevention and Control Act". After various bills were introduced, the Drug Subcommittee of the Mental Health Committee requested the Governor to refer all such matters to the Governor's Advisory Committee on Drug Control or to a similar agency so that the legisla-

(Continued on Next Page)

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

Hopkins

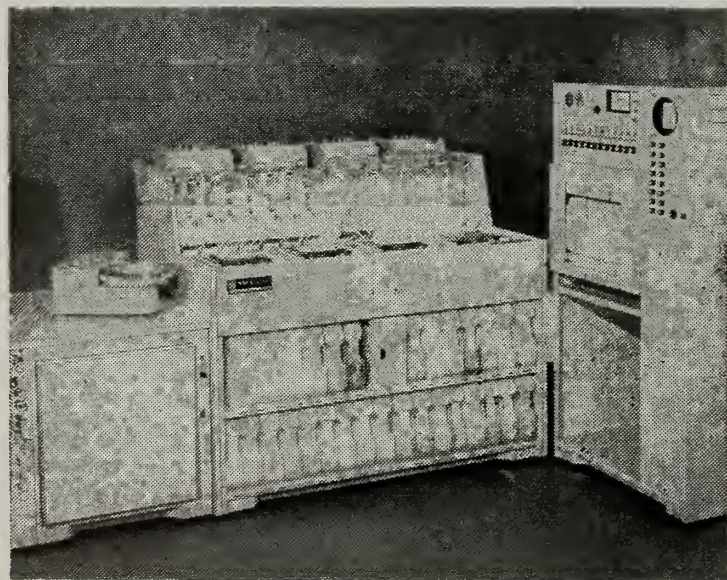
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

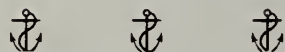
DONALD MATTERA
B.S. M.T. (ASCP)

tion could be closely reviewed by all interested agencies including representatives from the Rhode Island Medical Society. The review by such a committee could also permit use of any recommendation which the National Conference on Drugs would make since it is expected to complete its work this year.

Also introduced into the General Assembly was a proposal which would allow pharmacists to substitute a less expensive generic or other brand name drug originally prescribed. This bill died in committee.

Also failing to make any headway in the House were two bills to provide for the recording and registration of all prescriptions for narcotic drugs and another act which would have banned the delivery of certain substances of dangerous drugs as defined in schedules 3, 4, and 5 of the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970 and when the substances are marked sample or complimentary. This bill was aimed at the control of sample amphetamines.

Also failing to move from committee was a bill which would have created a five-member drug formulary commission within the Department of Health to formulate and to prepare a list of generic names of drugs. The five-member commission would have been appointed by the Governor. The bill would have provided that every physician who prescribes by brand name a drug listed in the formulary prepared by the Commission shall also include in each oral or written prescription the generic name or chemical name of the drug.



UNNECESSARY SURGERY

Oxford, England — Ninety-four workers at the Royal Mint have been found innocent of their crime — 847 years too late.

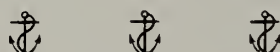
The men were accused by King Henry I in 1124 of pocketing silver and putting cheap tin in the coins they turned out.

As punishment, each man had his right hand cut off and was castrated.

An expert who had recently studied the coins with X-ray equipment said Henry was wrong.

Michael Metcalf, of the Ashmolean Museum, said: "Mr. Francis Schweizer, a Swiss scientist, and I tested 20 of these pennies with a milli-probe. And we found that the coins were more than nine-tenths pure silver."

. . . UPI dispatch.



ISAAC KAMINER, M.D. 1834-1901 PHYSICIAN, POET, AND SATIRIST

(Concluded from Page 468)

which he expressed his hope for Jewish survival in Palestine. He wrote:

"Israel's body is soft as a reed; its spirit is hard as iron." — Shir H a-Am.

This analogy concerning the people of Israel also describes the man himself. His spirit was hard as iron in spite of poverty and travail, and he did not complain. Every obstacle became a challenge.

He wrote: "I learned much from my teachers, more from my books, and most from my troubles." But physically he was unable to withstand the multiple traumas of a bitter life, and in 1901 his health broke down. On the advice of his medical colleagues he went to Bern, Switzerland for treatment. In March of 1901 he was operated on by the then famous surgeon Dr. Theodor Kocher (1841-1917). The operation was successful, and there was high hope for a complete recovery, but thereafter his condition worsened. For three weeks he suffered without complaint, and on April 5, 1901 the end came for this remarkable man. Shortly before his operation he wrote to his friend, Professor Osher Ginsberg (1856-1921), a philosopher and essayist, and asked him to publish his collected poems. In 1905 his wish was fulfilled, and his poems were published with an introduction by Professor Ginsberg.

Doctor Kaminer was a prolific contributor to the Hebrew press; his essays and parodies were full of fight and zeal for the Jewish national cause. In his poetry he had an original and extremely free metrical and rhythmical system. He does not rank with the great Hebrew poets, but his lack of creative facility was compensated for by his intense love and devotion to his people. He wrote a series of elegies bemoaning the suffering of the Russian Jews. His writings stressed and satirized the lack of justice and equality in the world, and to the last moments of his life he continued to write and fight for brotherly love. The last poem he wrote, shortly before his death, called "Widdui" (confession), laments the evil in the world, as well as his own mistakes in life and his disappointments in his children. His intense love and devotion to his people dominated his life. In one of his parodies he wrote that to him Judaism embodied but one dogma — "Thou shalt love thy

people with all thy heart, and all thy soul, and all thy might."

REFERENCES

Klausner J: **History of Modern Hebrew Literature** (Hebrew) Vol. VI, Jerusalem, 1950
Kaminer I: **Collection of Hebrew Poetry** (Hebrew), Odessa, 1905



FALL SCIENTIFIC MEETING

OF THE

Clinical Diabetes Association of Rhode Island

Speaker

MAX ELLENBERG, M.D.

Associate Attending Physician, Department of Medicine, Chief of Diagnostic Center, Mt. Sinai Hospital; Instructor in Medicine, Columbia University College of Physicians and Surgeons.

"DIABETIC NEUROPATHY"

at

**GEORGE AUDITORIUM
Rhode Island Hospital**

on

**TUESDAY, OCTOBER 26, 1971
at 4 p.m.**

All interested physicians, house staff, and medical students are cordially invited to attend.

EVALUATION OF COLLATERAL MYOCARDIAL BLOOD FLOW FOLLOWING LONG TERM IMPLANTATION OF THE INTERNAL MAMMARY ARTERY IN THE DOG

(Concluded from Page 461)

SUMMARY

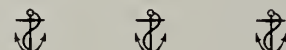
Twenty-two to forty-two weeks after the implantation of the internal mammary artery into the myocardium (Vineburg procedure), the collateral blood flow to the ischemic canine myocardium was measured by the direct injection of ⁸⁵Kr. Gradual obstruction of the left anterior descending and circumflex left coronary arteries was produced by ameroid rings. The average flow through the implanted internal mammary artery was found to be 62 ml/min/100 g of myocardial tissue. This compares with a total coronary blood flow of 47 ml/min/100g reported by Herd in the intact, unanesthetized dog. Both the magnitude of the blood flow through the implanted artery and a survival rate of 35 per cent of the group of animals receiving both ameroid ring constrictors and the arterial implant tend to support the view that the Vineburg procedure provides functional revascularization of the myocardium.

REFERENCES

- ¹Vineburg AM: Development of an anastomosis between the coronary vessels and a transplanted internal mammary artery. **Canad Med Ass J** 55:117-119, Aug 46
- ²Vineburg AM, Deliyannis T, Pablo G: Myocardial nutrition after the ivalon sponge operation. **Canad Med Ass J** 80:948-958 15 Je 59
- ³Vineburg AM, Bacerra A, Chari RS: The influence of the Vineburg sponge operation upon the hydrostatics of the myocardial circulation in health and disease. **Canad Med Ass J** 85:1075-1090, 11 Nov 61
- ⁴Vineburg AM, Mahanti BC: Evaluation of experimental myocardial revascularization operations by Ameroid coronary artery constriction. **Surgery** 47:748-764, May 60
- ⁵Litvak J, Siderides LE, Vineburg AM: The experimental production of coronary artery insufficiency and occlusion. **Amer Heart J** 53:505-518, Apr 57
- ⁶Bellman S, Frank HA: Vascular channels established by implantation of systemic artery into myocardium. **Ann Surg** 147:425-442, Apr 58
- ⁷Sones FM, Shirey EK: Cine coronary arteriography. **Mod Conc Cardiovasc Dis** 31:735-738, Jul 62
- ⁸Herman MV, Klein MD, Elliot WC et al.: Electrocardiographic, metabolic and anatomic predictions of zonal myocardial ischemia in coronary artery disease. **Circulation** 32:111 Supp II, 1965
- ⁹Gorlin R, Taylor WJ: Selective revascularization of the myocardium by internal-mammary-artery implant. **New Eng J Med** 275:283-290, 11 Aug 66
- ¹⁰Ueda K, Lichtlen P, Rees JR, et al.: Coronary blood flow measurement in dog and man using Kr 85 or Xe 133. **Fed Proc** 22:641, 1968
- ¹¹Herd JA, Hollenberg M, Thornburn GD, et al.: Myocardial blood flow determined with Krypton 85 in unanesthetized dogs. **Amer J Physiol** 203:122-124, Jul 62

- ¹²Krasnow N, Levine HJ, Wagman RnJ, et al.: Coronary blood flow measured by I¹³¹ iodo-antipyrine. **Circ Res** 12:58-62 Jan 63
- ¹³Forte IE, Schmitthener JE, Neal HS: Measurement of coronary blood flow using radioactive iodine compared with nitrous oxide. **Circ Res** 9:547-551, May 61
- ¹⁴Cohen LS, Hood WB Jr, Elliott WC, et al.: Measurement of myocardial blood flow using Krypton-85. **Clin Res** 11:164 Apr 63
- ¹⁵Criollos RL, AlShamma AM, Roe BB: Direct measurement of extrocoronary blood flow after revascularization procedures. **Ann Thorac Surg** 4:151-159, Aug 67
- ¹⁶Herd JA, Barger AC: Simplified technique for chronic catheterization of blood vessels. **J Appl Physiol** 19:791-792, Jul 64
- ¹⁷Ross RS, Ueda K, Lichtlen PR, et al.: Measurement of myocardial blood flow in animals and man by selective injection of radioactive inert gas into the coronary arteries. **Circ Res** 15:28-41 Jul 64
- ¹⁸Mallette WG, Schneider B, Tait IB: "Demand" and internal mammary artery implantation. **Circulation** 35:152-154, Suppl I, 1966
- ¹⁹Khoury EM, Gregg DE: Miniature electromagnetic flow meter applicable to coronary arteries. **J Appl Physiol** 18:224-227, Jan 63
- ²⁰Provan JL, Hammond GL, Austen WG: Flowmeter studies of internal mammary artery function after implantation into the left ventricular myocardium. **J Thorac Cardiovasc Surg** 52:820-832, Dec 66
- ²¹Reis RL, Enright LP, Staroscik RN, et al.: The effects of internal mammary artery implantation on cardiac function and survival following acute coronary artery occlusion. **Ann Surg** 171:9-16 Jan 70
- ²²Hansen AT, Haxholdt BF, Husfeldt E, et al.: Measurement of coronary blood flow and cardiac efficiency in hypothermia by use of radioactive Krypton 85. **Scand J Clin Lab Invest** 8:182-188, 1956

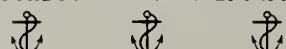
The Miriam Hospital
164 Summit Avenue
Providence, R. I. 02906



APLASTIC ANEMIA COMPLICATING ACUTE INFECTIOUS HEPATITIS: A CASE REPORT

(Concluded from Page 454)

- action against human tissue antigens in certain acute and chronic diseases. **Arch Intern Med** 101:30-46, Jan 58
- ²⁰Hummon WD, Enders JF: A virus disease of cats, principally characterized by aleucocytosis, enteric lesions, and the presence of intranuclear inclusion bodies. **J Exp Med** 69:327-351, Mar 39
 - ²¹Piazza M, Piccinino F, Matano F: Haematological changes in viral (MVH-3) murine hepatitis. **Nature** 205:1034-1035, 6 Mar 65
 - ²²Tigertt WD, Crosby WH, Berge TO, et al.: Virus of Venezuelan equine encephalomyelitis as an anti-neoplastic agent in man. **Cancer** 15:628-632, May-Je 62
 - ²³Famma PG, Paton WB, Bostock MI: Thrombocytopenic purpura complicating mumps. **Brit Med J** 2:1244, 14 Nov 64
 - ²⁴Nelson ER, Bierman HR: Dengue fever: A thrombocytopenic disease? **JAMA** 190:99-103, 12 Oct 64



RHODE island MEDICAL JOURNAL

THE FUTURE OF LABORATORY MEDICINE

Stanley M. Aronson, M.D. and
Herbert C. Lichtman, M.D. 495

AUTOMATION AND ITS IMPACT OF THE CLINICAL LABORATORY

Robert S. Melville, Ph.D. 497

APPLICATIONS OF RADIOIMMUNOASSAY TO PROBLEMS OF CLINICAL INTEREST

Solomon A. Berson, M.D. and Rosalyn
S. Yalow, Ph.D. 501

PRENATAL LABORATORY DIAGNOSIS OF HEREDITARY DISORDERS

Daniel P. Perl, M.D. 509

EDITORIALS 513

DERMAQUIZ 514

COVER: Abstracted detail of an instrument panel of a "series 1400" gas chromatograph, manufactured by Varian Aerograph of Walnut Creek, California.

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

The Future Of Laboratory Medicine

Prospective Role Encompasses Capability Of Exploring New Techniques And Translating Fundamental Discoveries To Clinical Application

By Stanley M. Aronson, M.D., and Herbert C. Lichtman, M.D.

The role of laboratory medicine in the diagnostic evaluation of hospitalized patients has broadened significantly in the past three decades. The hospital laboratory has grown from a marginally involved paramedical unit, frequently housed in the hospital basement, to its current status as a multidisciplinary department with a diversity of skilled personnel, instrumentation, and interests.

Statistical data convey only partially the increasing diagnostic responsibility assumed presently by the typical hospital laboratory. In 1946, 25 years ago, less than one laboratory test was performed, on average, for each day the patient spent in the hospital; the range of routine laboratory procedures available to the practicing hospital physician at that time was limited to about 20 discrete tests. The average number of tests performed during each patient's hospital day is currently in excess of five, and over 150 different laboratory procedures are routinely available in each of the major Providence hospitals. Tests of considerable technical sophistication employing immunochemical, chromatographic, cytometric, radioisotopic, and electrophoretic technics are now

indispensable tools in the average clinical laboratory.

NEW AND INNOVATIVE TECHNIQS

The hospital laboratory must be responsive to clinical needs in the management of patients. It must therefore be capable of exploring new and innovative technics and of translating fundamental discoveries to clinical application. In addition, the modern hospital laboratory must recognize its role as an educational center engaged variously in accredited residency programs in pathology, actively contributing to the graduate education of other residency training programs, teaching undergraduate medical students in the hospital laboratory and autopsy room environment, and supervising baccalaureate programs through intramural schools of medical technology. These varied diagnostic, investigative, and educational responsibilities have required that each hospital preserve the autonomy of its own laboratory. This principle, however, must be tempered by certain realistic considerations. Funds for laboratories are limited, and there are recognized shortages in the number of qualified laboratory scientists.

It has been recognized by many of the directors of laboratories in Rhode Island that a voluntary program of regionalization may therefore serve to improve the efficiency of their total laboratory efforts. Thus, hospitals possessing certain unique

(Continued on next page)

STANLEY M. ARONSON, M.D., *Pathologist-in-Chief, Department of Laboratory Medicine, The Miriam Hospital.*

HERBERT C. LICHTMAN, M.D., *Director of Clinical Pathology, Department of Laboratory Medicine, The Miriam Hospital.*

laboratory skills make their facilities available to sister institutions.

A cooperative educational program in laboratory medicine has also been advocated. Initiated largely through the efforts of Doctors Herbert Fanger and J. Horace Martin and sponsored by the directors of laboratories of the St. Joseph's, Rhode Island, and Miriam Hospitals, a city-wide, monthly program of seminars in laboratory medicine was inaugurated, supported by grants from the Regional Medical Program and the Rhode Island Department of Health. The seminars began in January, 1971, and brought nationally known authorities in aspects of laboratory medicine to speak to the Rhode Island medical community. Three of the papers within this issue of the RHODE ISLAND MEDICAL JOURNAL represent synopses of some of these evening seminars.

RADIOIMMUNOASSAY

Berson's discussion of radioimmunoassay describes a technic which brings us much closer to an accurate and reliable monitoring of biologically active substances circulating in concentrations as low as 10^{-11} gm. Heretofore, the concentration of hormones or polypeptides has been inferred only by virtue of its effects upon target tissues or circulating metabolites. The development of this technic represents one of the greatest advances in analytic methodology.

GAS-LIQUID CHROMATOGRAPHY

The recent development and clinical application of still further technics, such as gas-liquid chromatography, alters somewhat the relationship of the laboratory to clinical medicine. Presently, the practicing physician specifies one or more constituents of biological interest within serum, urine, or other fluid and requests that the laboratory perform a discrete quantitative analysis. Obviously, the number of compounds of potentially diagnostic significance in serum, urine, or other biological fluid far exceeds the number presently being analyzed or indeed, the number capable of identification. The concentrations of over 1,000 urinary compounds of low molecular weight are regarded by some research scientists as ultimately meaningful in diagnostic or prognostic terms. High resolution gas liquid chromatography has now yielded an exquisitely sensitive technic which is capable of isolating and identifying families of compounds during the course of a single analytic procedure. It is of considerable benefit in the recognition of circulating pharmacological agents

and their intermediate metabolites, amino acids, peptides, carbohydrates, complex lipids, and even in the precise identification of microbial organisms. The problems of environmental pollution will inevitably compel the clinical laboratory to provide data or verification of the nature and extent of various modes of intoxication. Gas-liquid chromatography is presently able to detect, for example, remarkably minute amounts of hydrocarbons.

The laboratory therefore may be asked not for quantitation of an explicit compound, but rather to study a family of compounds. It is likely that even the choice of laboratory tests may be left to the judgment of the laboratory staff and that future inquiries will be couched in the framework of a request for comprehensive evaluation, for example, of a patient's thyroid, hepatic, or renal function.

AMNIOCENTESIS

Perl's discussion regarding the utility of amniocentesis in the prospective identification of congenital disorders in the fetus emphasizes still another emerging facet of laboratory medicine. The means are presently available for the *in utero* laboratory diagnosis of numerous inborn disorders of metabolism. The measure of diagnostic reliability of such procedures is extremely high. The diseases capable of identification include Niamann-Pick disease, Gaucher's disease, and chromosomal disorders such as Down's Syndrome. The social implications of such a prospective capability, as Perl indicates, are immense.

The refined radioisotopic, chromatographic, or fluorometric procedures capable of demonstrating the enzymatic deficits underlying the inborn errors of metabolism, have also equipped the clinical laboratory with the means by which to identify the phenotypically normal heterozygote (carrier) of disorders such as Tay-Sachs disease, metabolic leucodystrophy, Fabry's disease, Duchenne's form of muscular dystrophy, phenylketonuria, and numerous heritable afflictions of infancy and childhood.

Amniotic fluids may also be employed for amino acid analysis, prenatal antibody screening, and the estimation of fetal maturity (using amniotic creatinine as a parameter of fetal renal maturation).

GENETIC FACTORS

Patients with many of the storage diseases can now be diagnosed through appropriate examination of their urine. The glycosphingolipids specific to

(Continued on Page 522)

Automation And Its Impact On The Clinical Laboratory

Fundamental Technologies Must Be Developed Before Successful Automation Can Be Accomplished

By Robert S. Melville, Ph.D.

We are experiencing rapid and profound changes in the field of medical care which have special implications for the clinical laboratory services. The clinical laboratories throughout the nation have had to take on the care of the healthy in addition to the already heavy responsibility of providing diagnostic tests for patient care and treatment. This is an enormous task, which is growing each day. It is estimated that at the present time half a billion tests are performed annually by the nation's clinical laboratories, and that this number will double within the next three years. It is clear that the only solution to this growing and critical problem will be to find ways to automate our clinical laboratories, since technical help is in short supply and would be

ROBERT S. MELVILLE, Ph.D., *Chief, Biochemical Sciences Section, Research Grants Branch, National Institute of General Medical Science.*

One of a series of lectures in early 1971 arranged by the laboratory directors of the Rhode Island, St. Joseph's, Roger Williams General, and The Miriam Hospitals as part of the Cooperative Laboratory Program sponsored jointly by the Rhode Island Department of Health and the Regional Medical Program of the United States Department of Health, Education, and Welfare.

too costly to employ in the numbers needed, even if available.

Much of this tremendous increase in the workload of the clinical laboratory is due to the increasing demand and demonstrated need for more laboratory tests in support of physicians' diagnosis. This situation also reflects the changes which are taking place in the practice of medicine as a result of ever increasing pay-offs from medical research. New discoveries which improve medical care and diagnosis invariably place more demands upon the medical laboratory and seldom, if ever, cause old tests to be dropped. Coupled with this is a growing recognition of the importance of laboratory tests which can be used for the early detection of disease. In part, this increased use of medical laboratories is a consequence of social, political, and economic pressures which are affecting and remolding the practice of medicine. Foremost among these pressures is the growing acceptance by the Congress that health care is a basic right of all of our citizens — with its corollary that all citizens must benefit equally from the advances in health sciences.

The implementation of this concept is compli-

(Continued on next page)

cated by the present serious dislocation in medical care in the United States that has resulted from a combination of a number of forces. These include the rapid increase of our population at the extremes of life — that is, the very young and the very old, where medical care is most needed — and the maldistribution of our physicians, with their concentration in medical centers and suburbs and their virtual disappearance from rural areas and the less attractive areas of our cities. There is an increasing specialization of medicine, a spiraling cost of medical care, a growing tendency towards institutionalization, and finally the ever increasing public expectation of the benefits of modern medicine. All of these tend to redistribute our physician's potential within the nation.

Thus, the stage is readily set for rapid advances in automating those techniques which are capable of automation in the clinical laboratories. A significant start has been made towards the automation of clinical laboratories (at least the chemistry laboratory) through the innovative uses provided by the continuous flow system developed by Dr. Leonard Skeggs. Indeed, were it not for this instrument, clinical laboratories of today would find themselves in still worse condition. Of course, the main impact of the system has been to mechanize those procedures which are routine and particularly adaptable to fluid flow problems, thus releasing technicians and clinical laboratory scientists to devote their time to the more sophisticated tests which still are relatively few in number but many times of equal importance. One of the principle impacts of the Skeggs machine has been the development of "mass screening." This is occasionally tied in with multiphasic screening, which utilizes a variety of automated computerized techniques that yield quantitative information which can substitute to a large extent for things the physician himself has had to do under the old concept of the annual physical examination. Here, the clinical laboratory scientists have much to offer by developing better methodologies and instruments, and better management of the clinical laboratory.

It appears that the laboratory sciences have more to offer preventive medicine than it currently is receiving from that source. For example: Public Health workers and physicians have long advocated the annual check-up as a device for disease prevention and maintenance of health. This is a fine idea in theory, but is totally impractical

as performed by current methods. For instance, today if every one were to follow this advice and seek an annual check-up from his own private physician our medical apparatus would soon be swamped. Thus, logic demands that our approach to the annual check-up be changed. A recently published letter from a patient indicated that he had to wait $5\frac{3}{4}$ hours for 35 seconds of his physician's time.

ROLE OF THE CLINICAL LABORATORY

The role of the clinical laboratory of the future will be determined to a considerable extent by the activities and special interests of the medical setting which provides the work demand of that individual laboratory. The laboratory which assumes too large a responsibility in the community will be unable to fulfill its obligations to the medical program. Laboratories must practice today within the scope of the overall mission of the "center" in which they find themselves.

The mission of the large medical center is primarily to educate physicians and other health personnel, to train specialists, to provide model health programs, to conduct research into basic problems of disease, and to develop and evaluate better methods of diagnosis and treatment. Thus, the laboratory should be an important resource to a medical environment and should be a dynamic and challenging place to work. There is little doubt in my mind that the future developments of clinical laboratory science are going to depend in a very large measure upon discovery and development of new and better analytical methods and instruments, and the situation ten years from now may bear no resemblance to what we see today.

Now that we have established a need for automation and for new, more definitive methods of diagnosis, let us explore the reasons why the clinical laboratory sciences are still figuratively in the dark ages. First, while most of the basic clinical scientists are concerned with solving medical problems, this is not necessarily their major aim. Investigation of normal and abnormal human biochemistry is not performed in the same kind of intellectual context as that of general biological biochemistry. The area of modern human biochemistry is not formalized, and there is thus a dichotomy in objectives.

The major thrust of general biochemistry and molecular biology has not in recent years been

directed at normal or abnormal human biology. Rather, both sciences have moved further and further into the fundamental areas more effectively explored in the simpler forms of life. This has created a widening gulf between these studies and their applicability to man. The relationship here between anatomy and pathology is germane. Anatomy is defined as, or identified with, the study of the structure of normal biological matter at all levels. Pathology (in the medical school at least) is identified with the deviations observed in disease, mostly oriented toward man. An analogous situation as between biochemistry and clinical chemistry, is not yet well defined academically. There are at present few, if any, mechanisms to encourage and reward scientists for studying normal human biochemistry as a primary discipline from which to launch explorations of variations in disease. The few efforts which are in existence are widely separated and are not formally organized or specifically identified for support.

POTENTIAL CONTRIBUTIONS TO CLINICAL MEDICINE

Individuals in other basic sciences have in the past contributed more to laboratory medicine than those working in the clinical laboratories. Partly this is caused by the full-time preoccupation of the clinical laboratory scientists with the service load of the laboratory. Thus, in general, the clinical laboratory scientist is so fully tied up in the day-to-day details of quality assurance, troubleshooting, and interpretation of results that he lacks the opportunity to learn about diseases and the needs of the medical profession. All of this points up the need for improved facilities for investigations in laboratory diagnosis. One solution to this problem would be to provide opportunities for research in the clinical laboratories.

There is a serious time lag between the development of basic research concepts and the transfer of these concepts from the basic biological sciences to the care and treatment of patients. Figuratively speaking, on the musty shelves of every laboratory in the country involved in basic research, may be found methods, ideas, and instruments which could and should be applied towards clinical diagnosis. It is estimated that the clinical laboratory sciences are at least ten years behind the basic medical sciences in the exploitations of these findings.

An anecdote will serve to emphasize another

reason why the basic research tools of today have not, as a rule, been applied to the clinical laboratory. A few years ago I had occasion to visit several research laboratories throughout the country to observe the types of research which were being carried on. I saw gas liquid chromatographs attached to mass spectrometers, nuclear magnetic resonance applied to biological problems, and x-ray spectroscopy and laser microprobe spectrometry both being applied to the identification of trace elements in biologic preparations. In a subsequent visit to various service clinical laboratories, the directors of these laboratories were queried as to how soon they felt they could use some of these newer tools which provide greatly improved sensitivity and selectivity, coupled with a decrease in the analytical time required for analysis. Almost to a man, these laboratory directors expressed the concern that the equipment was so sophisticated as to be beyond their competence without refresher training of some sort. Thus, until we can get adequately trained clinical laboratory scientists interested in research and development of these sophisticated instruments, and others which are rapidly coming on the market, we cannot hope for marked improvement in the quality of output from our clinical laboratories.

One of the major shortcomings of the clinical laboratory of today involves the analytical errors which are inherent in most methods currently in use. Oftentimes these are so great as to mask completely the true physiological variations which are thought to occur in normal individual. The point here is that existing mechanization will always give fair results, but never excellent results, nor ever really poor ones. Because of this discrepancy between the analytical error and the physiological range, establishment of normal values by present techniques is virtually useless. Often the result is merely an approximation. This reminds me of the girl being hard-pressed by two suitors, one a physicist, the other a clinical chemist. In order to arrive at an appropriate choice, the girl arranged for the two young gentlemen each to proceed in opposite directions for ten miles. Upon a prearranged signal, each was to turn and approach the girl by half of the distance each day. The physicist immediately heaved a sigh and stated, "Gee! I'll never get there, so I may as well give up now." The clinical chemist stopped, figured for a few minutes and said, "Oh! I guess

(Continued on next page)

in about 20 days I will be close enough for all intents and purposes."

LACK OF PRIMARY CLINICAL STANDARDS

Another problem is the lack of primary clinical standards for the evaluation and calibration of clinical laboratory instruments. We are forced to resort to reference standards for the calibrations of instruments and methods which often are known to contain impurities in sufficient concentrations to modify markedly enzyme assays. Until we can develop pure crystalline enzyme materials which may be placed in solutions and used to evaluate the reactions we are using for these tests, we are really wasting our time as far as the compilation of normal values is concerned. Finally, in addition to the need for improvement of the accuracy and reproducibility of those procedures used in the clinical laboratory is the problem of what to do with the mountains of data which are being created daily. These data are at the point now where the physician is almost incapable of absorbing their significance in the care and treatment of his individual patient. Are such data meaningful if never seen?

It has often been said that all of the concepts necessary for a completely automated clinical laboratory are in existence in industry or elsewhere — if only we knew where to look for them. Let us now begin to search for these concepts, as well as to develop new ones, which will apply specifically to our problems in the clinical laboratory. The existing analytic techniques that are available for routine use in many research chemical and biological chemistry laboratories provide one fruitful source. These techniques frequently are more accurate, yield a higher resolution, and involve a higher degree of automation than those found in today's clinical laboratory. However, to develop such systems and facilities as will be required in the very near future by the clinical laboratory we need to find highly motivated individuals from a variety of disciplines and place them in an environment which has the highest probability of insuring continued creativity. Scientists working in the clinical laboratory must be given an opportunity to apply their talents toward the development of new and better analytical methods and instruments.

I have not painted an inspiring picture of the clinical laboratory. With the advent of Medicare and Medicaid the government has thus had to

establish regulatory procedures for those laboratories that accept money for the information they provide. This control inevitably has been expanded to include proficiency testing, and in many states to licensing of the individuals responsible for the performance of the tests. Never in the history of medicine has so much reliance been placed on laboratory results in routine medical care or in diagnosis, treatment, and monitoring the course of therapy. The question remains then, How are the innovative research discoveries that are being carried out to be implemented or adopted for the actual practice of medicine? First of all, the ideas must be accepted by the physicians who are expected to use them. There have been only a few dramatic highly publicized and sometimes enormously expensive advances adopted in the large medical centers. As a matter of fact, the medical care most of us receive is virtually unchanged by the technological progress so far. For example, suppose that by a very exact and specific method the glucose value of a patient is found to be 100 mg/100 ml of serum. The normal by the method is 75 mg per cent. What does this mean? Does it mean the beginning of a diabetic condition? And if so, what does the physician do about it? Is it fair to the patient to put him on an extremely restricted diet for the next three years when the disease will progress regardless of treatment given? Diet will help, but once the disease has started to develop it's merely a matter of time. What is the impact of these slightly elevated values to the individual trying to buy life insurance to protect himself and his family?

Actually, the doctor barrier can effectively inhibit the development and, equally important, the acceptance of useful medical devices. Another question which comes to mind relates to the use of multi-testing in the clinical laboratory. Is it appropriate, or even valid, to perform 20 tests on a given individual and make a diagnosis based on those 20 tests when the tests themselves are subject to serious questioning?

Are these the appropriate tests to choose in order to evaluate a patient's condition? Is screening a second class procedure as opposed to analytical testing? As I mentioned earlier, to automate any of these procedures which are subject to serious question is really begging the issue. Automation implies that a computer will identify (flash a light!) those patients which are sick from those

(Continued on Page 520)

Applications Of Radioimmunoassay To Problems Of Clinical Interest

Sampling Of Some Physiologic Applications And Diagnostic Uses Of Radioimmunoassay Indicates Potentialities Of Method

By Solomon A. Berson, M.D., and Rosalyn S. Yalow, Ph.D.

Radioimmunoassay originally developed out of investigations on antibodies to hormones. The techniques employed proved useful for the detection of antibodies in non-precipitating systems and were then applied to radioimmunoassay of antigens and other substances.

ANTIBODIES TO HORMONES

The earliest studies¹ were stimulated by the observation that ¹³¹I-labeled insulin disappeared very slowly from the blood stream of diabetics who had been treated with insulin, but disappeared with normal rapidity in untreated diabetics. We suspected that this difference in behavior might be due to the development of insulin antibodies in

SOLOMON A. BERSON, M.D., *Murray M. Rosenberg Professor of Medicine and Chairman, Department of Medicine, Mt. Sinai School of Medicine. Senior Medical Investigator, Veterans Administration.*

ROSALYN S. YALOW, Ph.D., *Chief, Nuclear Medicine Service, Veterans Administration Hospital, Research Professor of Medicine, Mt. Sinai School of Medicine.*

One of a series of lectures in early 1971 arranged by the laboratory directors of the Rhode Island, St. Joseph's, Roger Williams General, and The Miriam Hospitals as part of the Cooperative Laboratory Program sponsored jointly by the Rhode Island Department of Health and the Regional Medical Program of the United States Department of Health, Education, and Welfare.

treated subjects, but since most of these patients are not obviously resistant to insulin it was evident that the amount of antibody in their plasmas might be quite small. To detect low concentrations of antibody, we took advantage of the ability to measure very small amounts of ¹³¹I-insulin. Also, since we were unable to demonstrate precipitation of the labeled insulin in serums suspected of carrying antibodies, we sought other means of demonstrating the antibodies. Very useful techniques for this purpose proved to be paper electrophoresis and paper chromatoelectrophoresis (Fig. 1). In common with many other peptide hormones, insulin in free state tends to absorb firmly to paper. In contrast, it is prevented from doing so when bound to antibody. Therefore, if an incubated mixture of labeled insulin and plasma is applied to a strip of filter paper for electrophoresis or chromatoelectrophoresis, the labeled insulin in the plasmas of untreated subjects remains at the site of application, namely the origin, whereas, in the plasma of treated patients in whom antibody has developed, the insulin bound to the antibody moves between the gamma and the beta globulins. On chromatoelectrophoresis, the serum proteins do not separate significantly from each other, but, within a matter of only 20-30 minutes, all of the serum proteins carrying the insulin-antibody complexes have migrated away from the origin.

(Continued on next page)

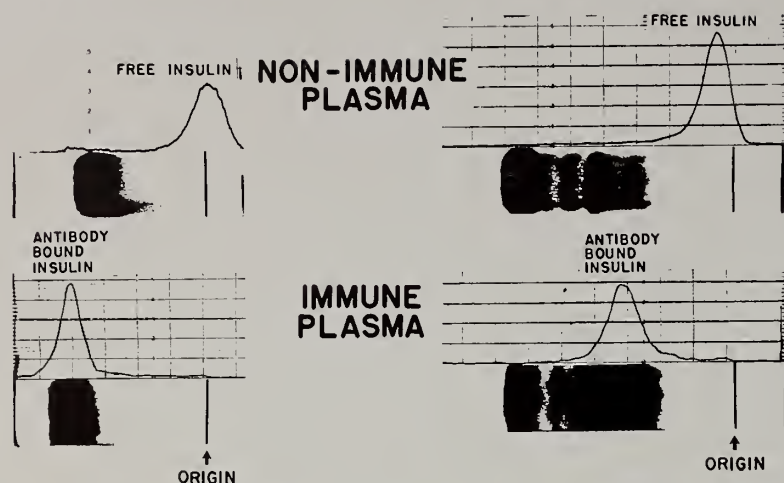


Fig. 1—Demonstration of insulin-binding antibody by paper electrophoresis (right) and chromatoelectrophoresis (left). In the latter procedure strips are exposed to the open atmosphere during electrophoresis for 45-90 minutes so that migration of plasma proteins results primarily from hydrodynamic flow chromatography. (Reproduced from Ref. 17.)

ACTH- I^{131} IN PLASMA OF GUINEA PIG

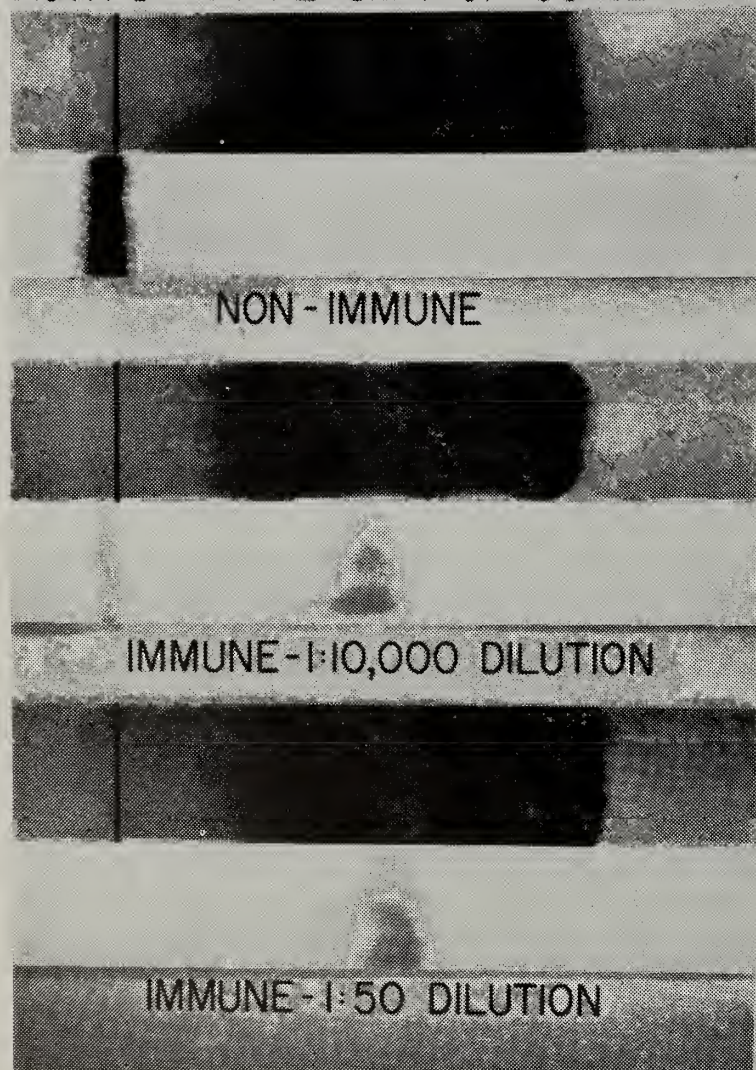


Fig. 2—Stained paper electrophoresis strips with respective autoradiographs of ACTH- I^{131} in plasma from non-immunized guinea pig (top) and immunized guinea pig (middle and bottom), the latter two at different dilutions. Autoradiographs show that antibody-bound ACTH- I^{131} migrates between ϕ and ψ globulins; free (unbound) ACTH- I^{131} is absorbed to the paper at the site of application.



Fig. 3—Immunoelectrophoresis: rabbit anti-human whole serum in all troughs. Top well: HGH- I^{131} in plasma of growth hormone-treated patient prior to HGH therapy. Middle well: HGH- I^{131} in plasma of patient 9 days after second course of HGH therapy (20 mg/day for three weeks). Bottom well: same as middle well plus large excess of unlabeled HGH. Identical amounts of HGH- I^{131} were present in all wells. Note unlabeled HGH competitively inhibits binding of HGH- I^{131} to antibody. There is a small amount of non-specific binding of radioactivity to several proteins.

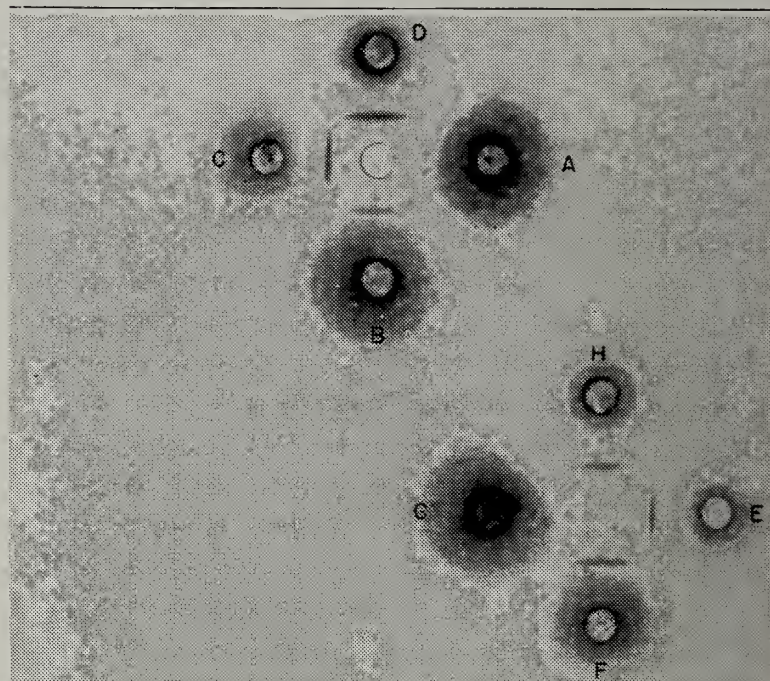


Fig. 4—Autoradiograph of an Immunodiffusion Plate. Mixtures of plasma and ^{131}I -labeled bovine parathyroid hormone (pth) were incubated overnight and then placed in outer wells. A & G: control plasmas from patients never treated with pth. B, C, D, E, F: plasmas of pth-resistant patients at various times after therapy resumed. Both central wells contained rabbit antihuman gamma globulin. Visible precipitin arcs appeared after twelve hours of incubation at room temperature. After incubation for thirty-six hours, the slide was washed overnight with physiologic saline solution dried and placed in contact with x-ray film for autoradiography. The radioreactive precipitin arcs are produced by precipitation (with rabbit antihuman gamma globulin) of ^{131}I -labeled parathyroid hormone bound to human antibody pth. ^{131}I -labeled hormone not bound to antibody tends to adsorb to glass and gel, causing the bright halos around some of the outer wells. (Reproduced from Ref. 4.)

The strips may be passed through an automatic strip counter (Fig. 1), or, alternately, the radioactive zones can be readily detected simply by placing the strips in contact with x-ray film in order to obtain an autoradiograph.² In Fig. 2 the labeled ACTH in the plasma of the unimmunized control guinea pig remained at the origin but moved with antibody in the plasma of the immunized animal when the plasma was diluted only 1:50. When the latter plasma was further diluted to 1:10,000, the antibody concentration was lowered to the point where only about half the labeled ACTH was bound and both free ACTH and antibody-bound ACTH are evident on the autoradiograph.

A variety of other techniques can be used to demonstrate non-precipitating antibodies to peptide hormones. As an example of the method of radioimmuno-electrophoresis on agar gel, suspected human antisera containing a small amount of labeled human growth hormone were placed in the central wells in Fig. 3. After electrophoresis, during which time serum albumin had migrated towards the right and serum gamma globulin towards the left, rabbit antiserum directed against the human serum in the central wells was applied in troughs parallel to the direction of migration of the suspected human antisera. The growth hormone-antibody complexes themselves do not precipitate, but diffuse into the gel after electrophoresis. These complexes are then precipitated by the antihuman gamma globulin. Radioactive growth hormone in the precipitated complexes then produces a radioactive precipitin arc. These studies were performed to identify antibodies to human growth hormone in human subjects treated with the hormone.³ Though it might be surprising that the human hormone is antigenic in human subjects, the antigenicity can be attributed to the presence of somewhat denatured fractions of the hormone in the treatment preparations. Although most patients treated with the hormone develop antibodies, it is only occasionally that the antibody concentration reaches sufficiently high levels to produce resistance to further effects of the hormone.

It has long been known that treatment with animal preparations of parathyroid hormone soon induces resistance to the effects of this hormone, and it has long been suspected that antibodies are the cause for the resistance. In Fig. 4 the presence of such antibodies was actually demonstrated.⁴

The technique used here is quite similar to that of immunoelectrophoresis except that the molecules are allowed simply to diffuse into the gel without the force of the electric field. Labeled parathyroid hormone was added to plasma samples from a resistant patient and to plasmas from control subjects. These mixtures were placed in the outside wells. Rabbit anti-human gamma globulin was placed in the central well. When the diffusing anti-human gamma globulin and the human gamma globulin meet each other in proper proportions, they precipitate; and the precipitin lines are readily seen with the naked eye in all samples. Only in the samples from the resistant patient were there parathyroid hormone antibody molecules capable of binding the labeled hormone and producing a radioactive precipitin line. The controls show no *radioactive* precipitin lines.

AUSTRALIA ANTIGEN

Similar techniques have been employed for the detection of antibodies to substances other than hormones. Last year a radioimmunoassay was developed for Australia antigen.⁵ We shall later discuss the assay for Australia antigen, but during the course of these studies it was necessary to provide a suitable technique for detecting low concentrations of antibodies to the antigen. As with the hormones described, the antibody-bound and the free labeled Australia antigen could be separated on paper chromatoelectrophoresis. However, the distribution of free and bound antigen was the opposite of that observed with the ACTH and insulin described earlier. Free labeled Australia antigen migrates with the serum proteins, while labeled antigen-antibody complexes precipitate at the origin.⁵ This technique provided far greater sensitivity for the detection of antibody to Australian antigen than prevailing methods. In Fig. 5 are shown the tests for antibody following the development of serum hepatitis in a patient given multiple blood transfusions. At about 6 weeks, antibody was detected both by immunodiffusion in agar gel and by complement fixation. After this period of time antibody could no longer be detected by either of these methods, but was still detectable for at least 2 years using I^{125} -labeled Australian antigen.⁶

HORMONE ASSAY

So much for the detection of antibodies using isotopically labeled antigens. We now wish to discuss the use of these techniques in radioimmuno

(Continued on next page)

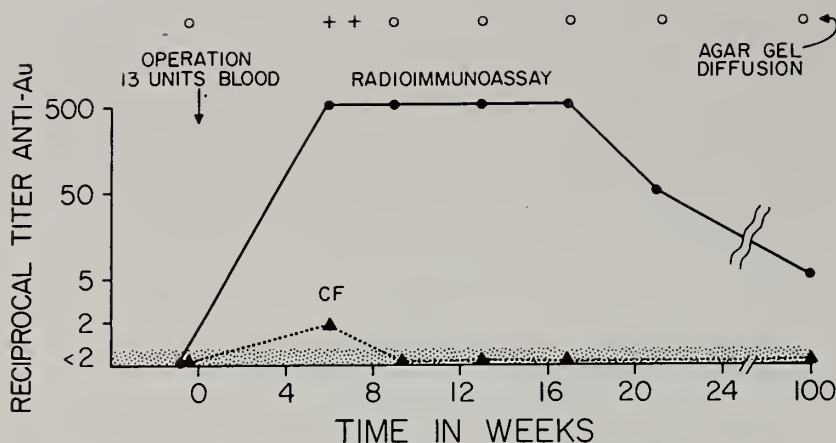


Fig. 5 — Detection of anti-Au in serial serum specimens obtained from a patient who received multiple transfusions during open heart surgery. Results obtained by complement fixation and by radioimmunoassay are shown as reciprocals of the maximum dilution producing a 3+ reaction or a B/F ratio greater than 0.2 respectively. Results obtained by precipitation on diffusion in agar gel are indicated above. Serum transaminase (SGPT) levels on these specimens were all less than 50 Karmen U/ml. (Reproduced from Ref. 6.)

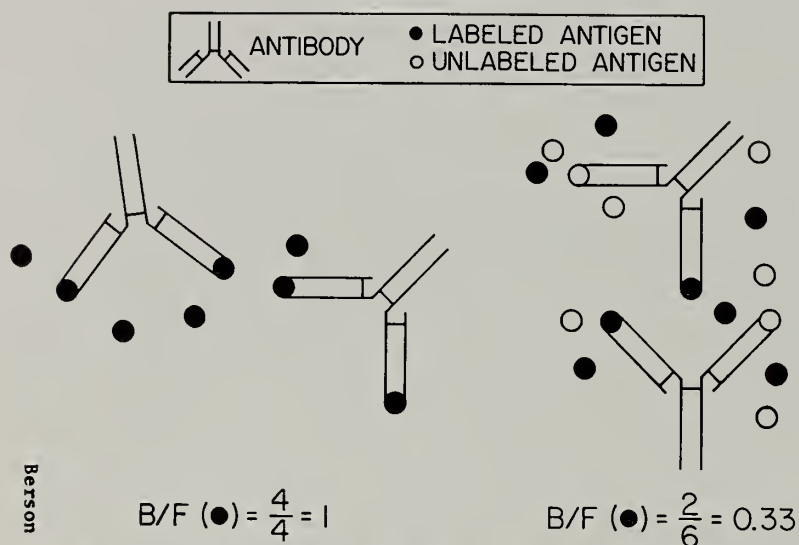


Fig. 7 — Modular model of competitive radioimmunoassay. Unlabeled antigen competes with labeled antigen for combining sites on molecules, thereby lowering the ratio (B/F) of bound (B) to free (F) labeled antigen.

assay, which is designed not to detect or measure antibodies but to measure hormones and other substances.

The principles of radioimmunoassay are summarized in the set of competing reactions shown in Fig. 6. The labeled hormone binds to its specific antibody to form a labeled antigen-antibody complex. Now, let us suppose that the antiserum is diluted sufficiently so that there is just enough antibody present to bind about 50 per cent of a small tracer quantity of labeled hormone. If we should add to such a mixture of labeled hormone and antiserum a relatively large quantity of unlabeled hormone sufficient to occupy most of the combining sites on the antibody molecules, the labeled hormone would be excluded by competition and very little of it, much less than 50 per

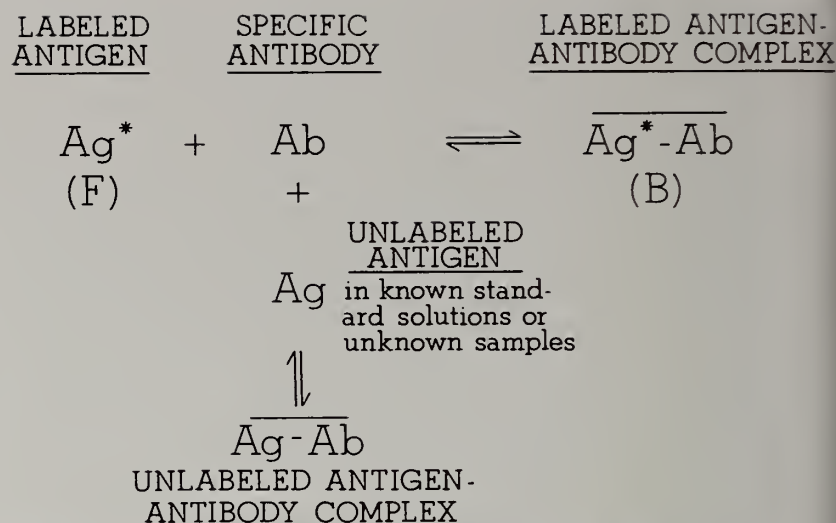


Fig. 6 — Competing reactions that form the basis of the radioimmunoassay.

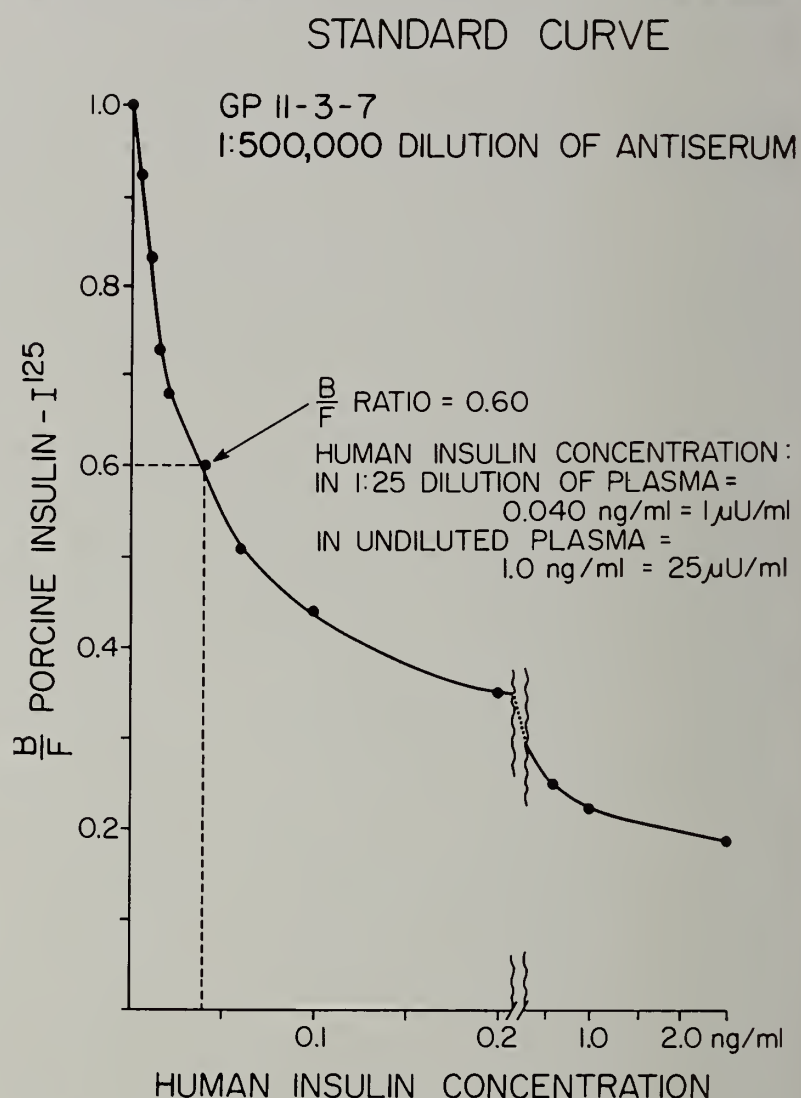


Fig. 8 — Standard curve for assay of human insulin. Method of calculation of hormone concentration in unknown plasma.

cent, would end up in the bound form. The molecular model (Fig. 7) illustrates the principle of competitive inhibition. Assume that an average micro-sample of the solution contains 8 molecules of labeled antigen and 2 antibody molecules, each with 2 combining sites, and assume also that all the combining sites on the antibodies are occupied. We then have 4 bound and 4 free labeled antigen molecules yielding a bound-to-free (B/F) ratio of 1. If, however, we add to such a mixture 8 unlabeled antigen molecules that can compete on

Table I
COMPETITIVE RADIOASSAY

IMMUNE SYSTEMS (ANTIBODY IS THE SPECIFIC REACTOR)

| PEPTIDE HORMONES | | NON-HORMONAL SUBSTANCES | | NON-PEPTIDAL HORMONES |
|------------------|---------------|-------------------------|-------------|-----------------------|
| Insulin | Vasopressin | Intrinsic Factor | Rheumatoid | Aldosterone |
| Growth H. | Angiotensin | Digoxin, | Factor | Testosterone |
| ACTH | Oxytocin | Digitoxin | Human IgG | Dihydrotestosterone |
| Parathyroid H. | Bradykinin | Morphine | Folic Acid | Estradiol |
| Glucagon | Thyroglobulin | cAMP, cGMP, | Neurophysin | Estrone |
| TSH | λMSH | cIMP, cUMP | TBG | Estriol |
| HCG | βMSH | Australia | Urinary | 2-Hydroxyestrone |
| FSH | Gastrin | Antigen | Albumin | Prostaglandins |
| HCS | Calcitonin | C ₁ Esterase | | Triiodothyronine |
| Proinsulin | Proinsulin | Fructose, 1,6 | | |
| Secretin | C-Peptide | Diphosphatase | | |
| LH | PZ-CCK | CEA | | |

NON-IMMUNE SYSTEMS

| HORMONES | SPECIFIC REACTOR | NON-HORMONAL SUBSTANCES | SPECIFIC REACTOR |
|-------------------|------------------------|-------------------------------|-------------------------|
| Thyroxine | | Vitamin B ₁₂ | Intrinsic factor |
| Cortisol | | Folic Acid | F. A. reductase |
| Corticosterone | | cAMP, cGMP | Phosphodiesterases |
| Cortisone | Specific binding | Messenger RNA | Complementary DNA |
| 11-desoxycortisol | proteins in plasma | | (Competition-annealing) |
| Progesterone | | | |
| Testosterone | | | |
| ACTH | Adrenal receptor sites | | |

equal terms with the labeled form, the latter will be displaced from the antibody and the bound-to-free ratio for the labeled antigen is reduced to 1/3. If the concentration of unlabeled molecules were much higher, the combining sites would be swamped by them and the B/F ratio for the labeled antigen would approach zero. Thus, the reduction in the labeled B/F ratio provides a measure of the quantity of unlabeled antigen present.

In summary, if the antibody concentration is made limiting by dilution of the antiserum, a reduction in the binding of labeled antigen occurs to an extent depending on the concentration of unlabeled antigen. The competitive inhibition of the binding of labeled antigen may be expressed as a decrease in percent bound labeled antigen (B), an increase in percent free labeled antigen (F), or, more frequently, as a reduction in the B/F ratio. In practice, one prepares a series of standard solutions containing known quantities of added hormone. A standard curve is obtained in which the B/F ratio for the labeled hormone decreases as expected with increasing concentration of unlabeled standard (Fig. 8). The concentration of hormone present in an unknown sample is determined from the observed labeled B/F ratio in that sample by reference to the standard curve.

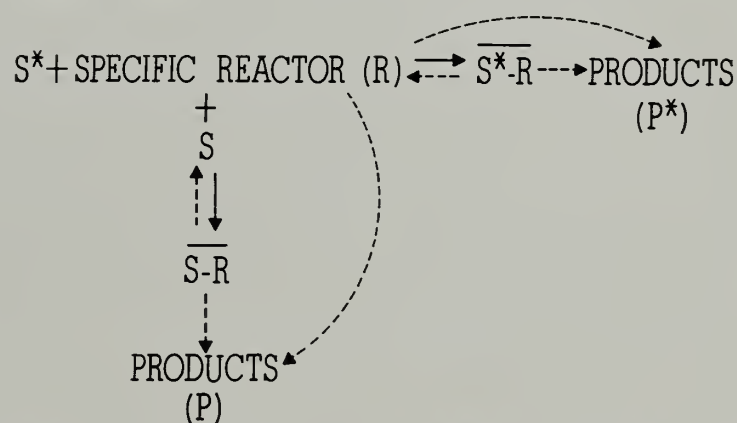


Fig. 9—Application of radioassay principle physical or chemical reactions in non-immune systems. Degree of competitive reactions may be determined from changes in concentration of labeled free substrate (S*) or substratereactor complex (S*-R) or, when enzyme is specific reactor, inhibition of product formation.

NON-IMMUNE AND NON-HORMONAL SYSTEMS

The application of the radioimmunoassay principle to non-immune systems and to non-hormonal substances may be summarized in the more general set of reactions shown in Fig. 9. Here S is any substance to be measured and R is a specific reactor for S. The added term P for products applies when R is specific enzyme for substrate, S, or when R is any reactor capable of altering S specifically. Table I is a nearly up-to-date summary of substances that have been measured by this principle, which in its more general aspects

(Continued on next page)

Table II
ANTI-AU AND AU IN "HIGH RISK" PATIENTS

| | Anti-Au | Au | Negative |
|-------------------------------|---------|------------|----------|
| Drug Addicts | 7 | 13 | 24 |
| (elevated SGPT) | (6) | (11) | (9) |
| Hemophiliacs | 11 | 1 | 2 |
| Renal Dialysis Patients | 6 | 2 | 7 |
| Hospitalized Veterans | 26 | not tested | 132 |

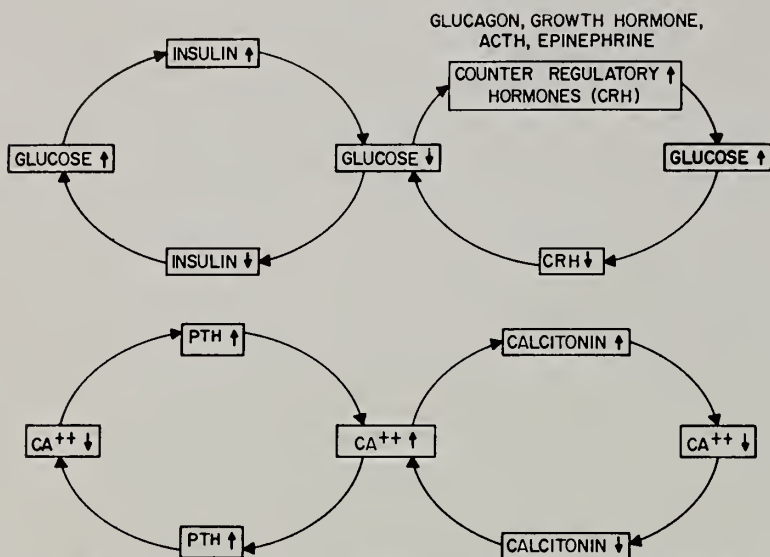


Fig. 10 — Representative feed-back regulatory systems controlling hormonal secretion.

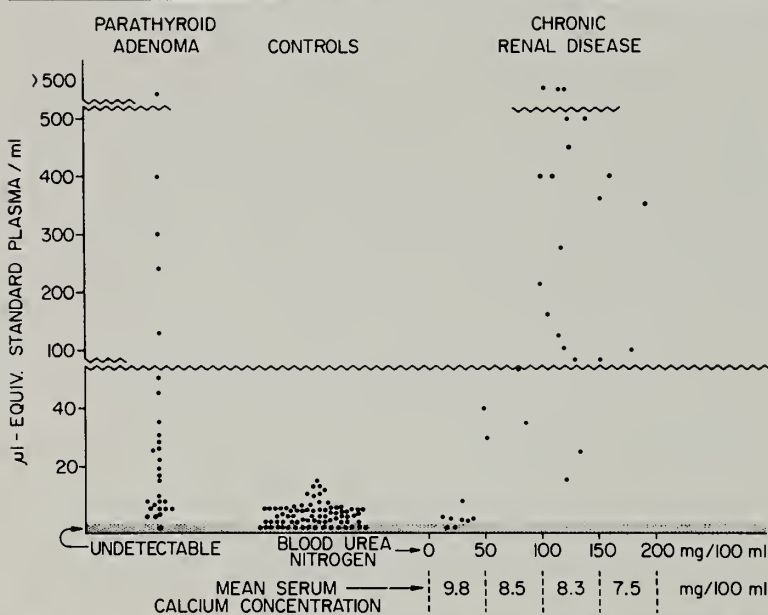


Fig. 12 — Plasma concentrations of parathyroid hormone in normal subjects and in patients with parathyroid adenoma or chronic renal disease. (Reproduced from Berson, S. A. & Yalow, R. S.: The Harvey Society, N. Y. Acad. Med., Dec. 15, 1966. In The Harvey Lectures Series 62, 1966-1967. New York: Academic Press, 1968. p. 107.)

may be termed Competitive Radioassay. In addition to more than a score of peptide hormones and other proteins, such as rheumatoid factor, gamma globulin, and enzymes, drugs including morphine and cardiac glycosides, as well as such biologically active molecules as cyclic AMP and other cyclic nucleotides, have been measured by radioimmunoassay. These small molecules are not in themselves antigenic, but can be rendered so by coupling to serum proteins or other large peptides. The so-called competitive protein binding assays for thyroidal and steroidal hormones,

PARATHYROID HORMONE AND CALCITONIN CONCENTRATIONS IN PIG PLASMA DURING EDTA AND CALCIUM INFUSIONS

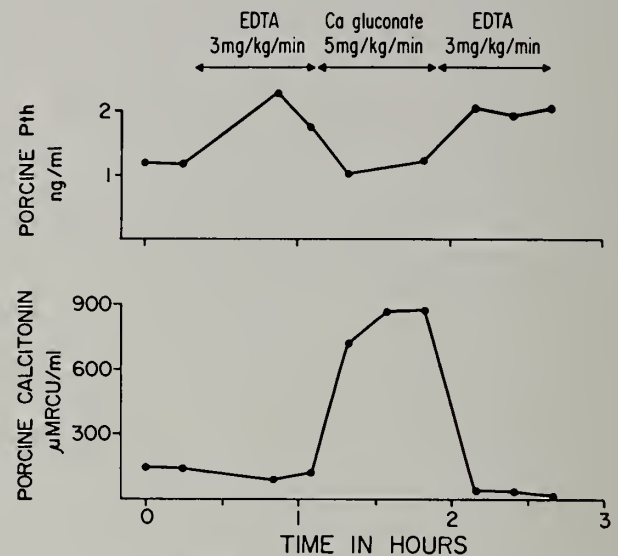


Fig. 11 — Plasma pth and calcitonin concentrations in a pig during EDTA and calcium infusions (Reproduced from Ref. 7.)

UREMIA - SECONDARY HYPERPARATHYROIDISM

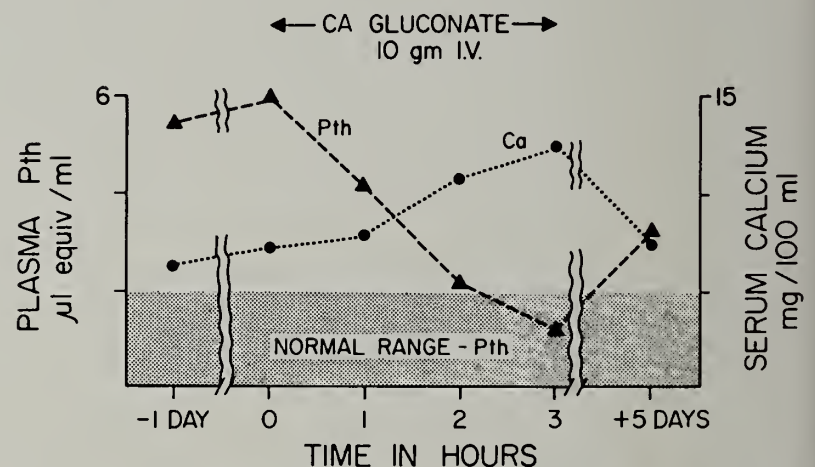


Fig. 13 — Effect of calcium infusion on plasma pth concentration in a patient with uremia and secondary hyperparathyroidism.

largely developed by Beverly Murphy and her colleagues in Montreal, are based on this principle. Here, the specific binding proteins in plasma serve as specific reactors. More recently, radioimmunoassays also have been developed for some of these hormones by coupling them to serum proteins to render them antigenic.

The first viral antigen to be measured by radioimmunoassay is Australia antigen. We have already discussed the separation of the free and the antibody-bound Australia antigen by means of paper chromatoelectrophoresis. Separation can also be effected by high speed centrifugation.⁶ Table II shows the incidence of detectable antigenemia

UREMIA - SECONDARY HYPERPARATHYROIDISM

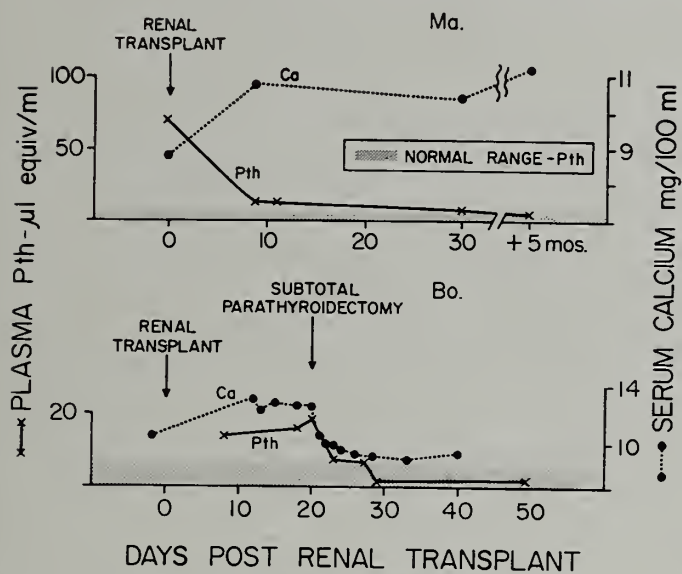


Fig. 14 — Effect of renal transplantation on plasma pth concentrations and serum calcium in two patients with secondary hyperparathyroidism. Subtotal parathyroidectomy was performed in one patient in whom there was persistent hypercalcemia and increased plasma pth concentration twenty days after renal transplantation. (Reproduced from Ref. 11.)

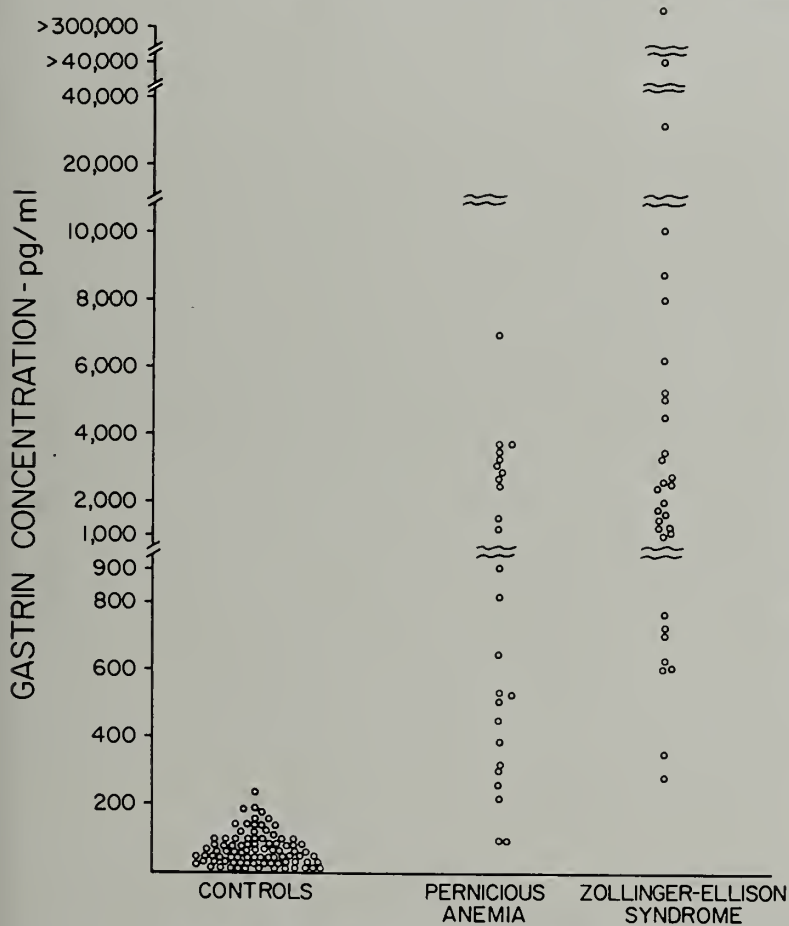


Fig. 16 — Basal plasma gastrin concentrations in normal subjects and in patients with pernicious anemia and Zollinger-Ellison syndrome.

and antibody in groups of patients who are particularly exposed to Australia antigen.⁶ In a group of over 200 drug addicts now under treatment in the Mt. Sinai Methadone Maintenance Clinic (New York) the incidence of antigenemia or antibody or both is over 60 per cent (unpublished observations).

HORMONAL REGULATION

Now, to return to hormones, the radio immunoassay has proven useful not only for studying the

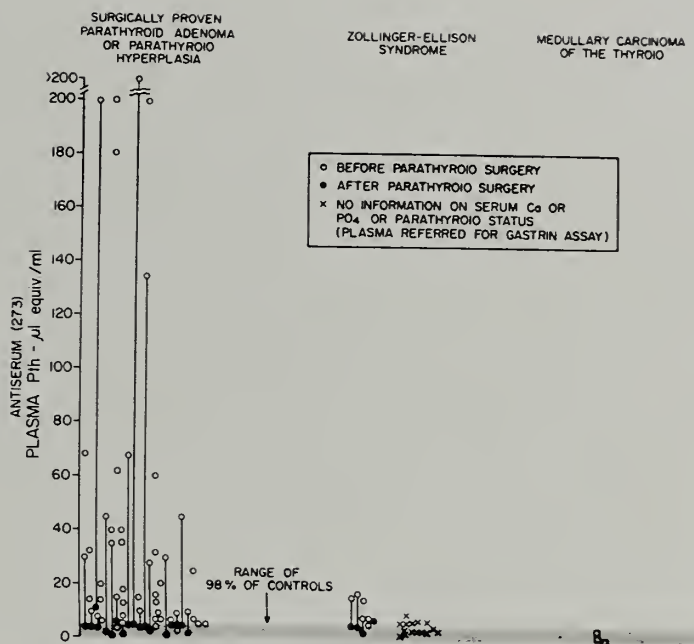


Fig. 15 — Plasma pth concentrations in patients with surgically proven parathyroid adenoma or parathyroid hyperplasia, patients with Zollinger-Ellison syndrome, and patients with medullary carcinoma of the thyroid. Stippled area at bottom shows range of values for 98 per cent control subjects. (Reproduced from Ref. 11.)

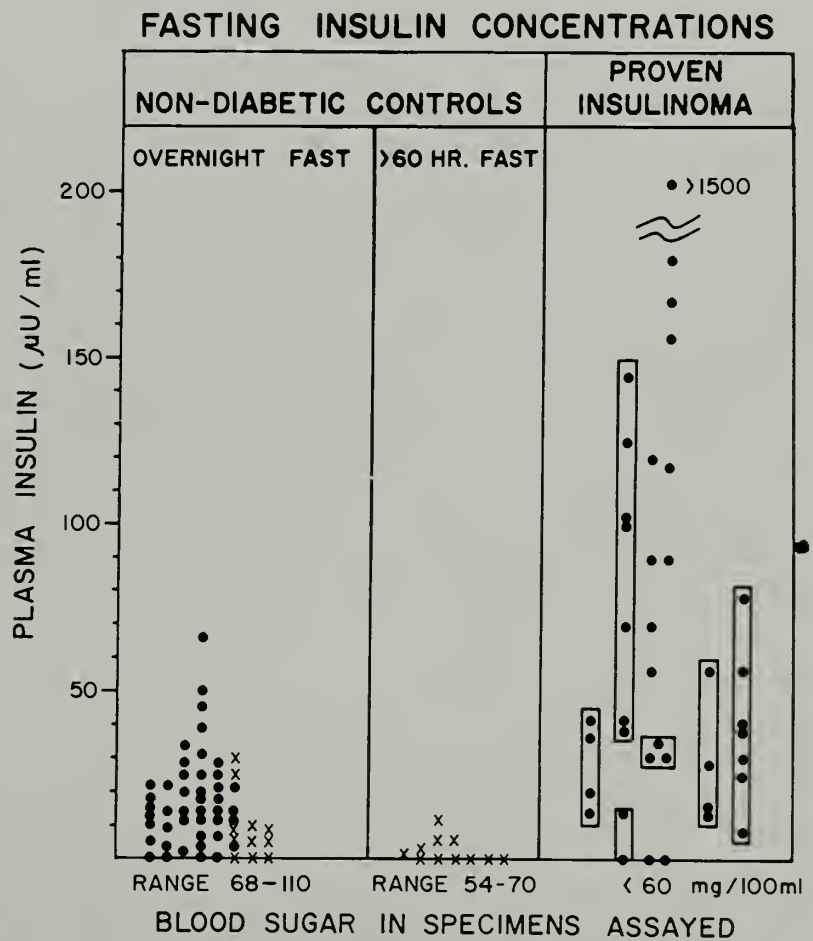


Fig. 17 — Fasting insulin concentrations in normal subjects after an overnight fast (left) and after more than sixty hours fasting (center). The x's represent the cases studied under both conditions. (Right) Fasting insulin concentrations in hypoglycemic patients with proven insulinoma. The points in the rectangles correspond to multiple samples in the same subjects. (Reproduced from Ref. 15.)

physiologic regulation of hormonal secretion, but also in the diagnosis of diseases associated with hormonal excess or hormonal deficiency. Proper interpretation of hormone measurements requires

(Continued on next page)

CHANGES IN BLOOD GLUCOSE AND PLASMA INSULIN CONCENTRATIONS DURING 100 gm ORAL GLUCOSE TOLERANCE TEST IN NON-OBESE SUBJECTS (<10% OVERWEIGHT)

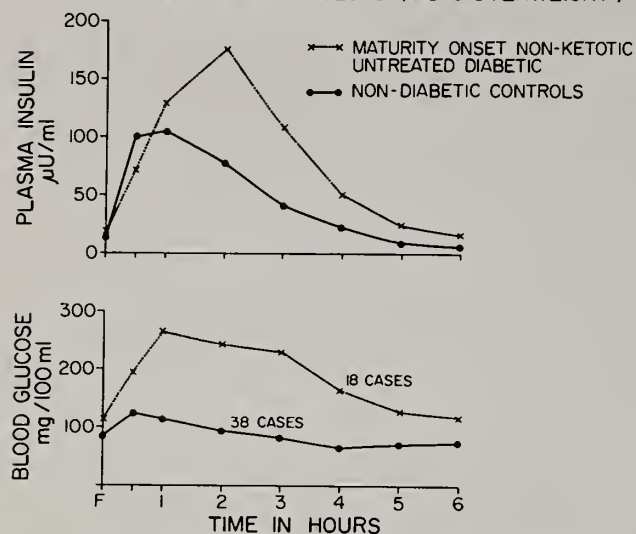


Fig. 18 — Plasma insulin concentrations in the fasting state and after ingestion of 100 g. of glucose in non-obese (less than 10 per cent overweight), maturity-onset diabetic subjects and non-diabetic controls. (Reproduced from Berson, S. A. & Yalow, R. S.: The Harvey Society, N Y. Acad. Med., Dec. 15, 1966. In The Harvey Lectures, Series 62, 1966-1967. New York: Academic Press, 1968. p. 107.)

a clear understanding of the factors regulating the hormonal secretion. In general, hormonal secretion is stimulated by a disturbance which the hormone is designed to correct. The principal regulation of hormonal secretion is usually through the operation of some sort of feed-back control loop containing the hormone at one axis and an electrolyte, metabolite, volume receptor, or another hormone at the other axis. Furthermore, in order to provide finer control of essential processes, a double or triple loop system operates to prevent excessive overshoot. Models of such systems are shown in Fig. 10. Hyperglycemia is a potent stimulus to insulin secretion, which in turn serves to lower the blood glucose level; but, in order to avoid dangerous hypoglycemia, not only must insulin secretion be turned off when blood sugar falls, but also the secretion of a number of counter-regulatory hormones is stimulated. These hormones serve, by different mechanisms, to raise blood glucose levels and to restore a euglycemic state. Glucagon provokes glycogenolysis by which hepatic glucose is made available to the blood. Epinephrine abolishes insulin secretion. Growth hormone, after a 1-2 hour lag period, inhibits glucose utilization in muscle and fat, and cortisol stimulated by ACTH, promotes gluconeogenesis from amino acids. The combined operation of these loops provides for homeostasis of blood glucose levels.

In a similar way, the level of serum calcium is normally maintained within narrow limits by the action of both parathyroid hormone and calci-

ALIMENTARY HYPERGLYCEMIA

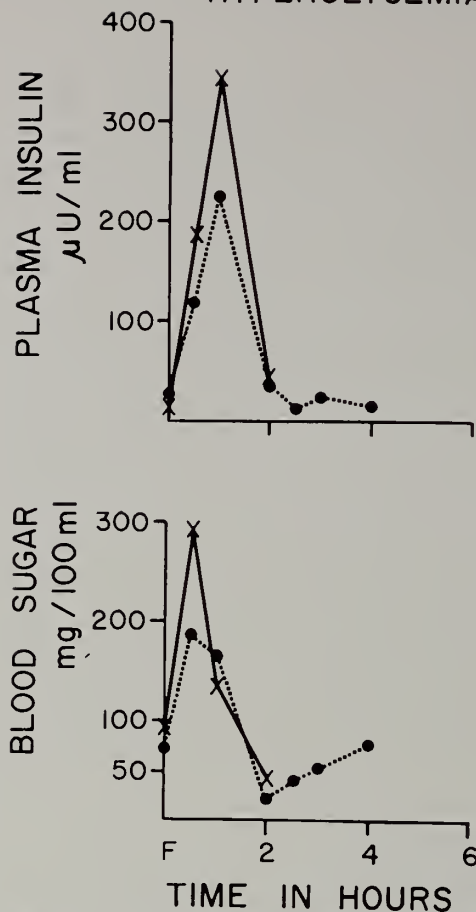


Fig. 19 — Blood glucose and plasma insulin concentration in two gastrectomized subjects with initial hyperglycemia and late hypoglycemia following 100 gm glucose by mouth.

PLASMA HGH & BLOOD GLUCOSE FOLLOWING INTRAVENOUS INSULIN

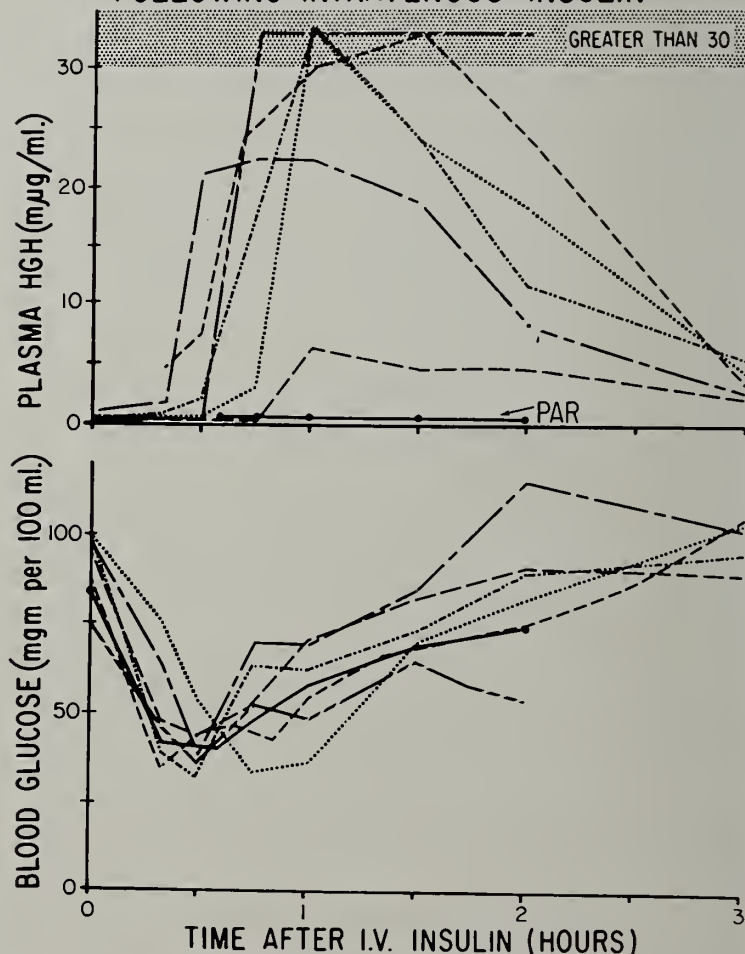


Fig. 20 — Plasma human growth hormone (HGH) and blood glucose concentrations after insulin administered intravenously. (PAR, a hypophysectomized patient; other patients, normal.) (Reproduced from Ref. 8.) (Continued on Page 515)

Prenatal Laboratory Diagnosis Of Hereditary Disorders

Amniocentesis And Fibroblast Tissue Culture Permit In Utero Diagnosis Of Hereditary Metabolic Disorders

By Daniel P. Perl, M.D.

Until very recently couples seeking family planning advice following the birth of a child with a severe hereditary disorder were merely given a simple statistical probability of the defect repeating itself in future pregnancies. Their only choice was to weigh this probability risk against the desire for additional children and then reach a decision. These probability statistics, when available, are often imprecise and, when combined with the emotional pressures experienced by these couples, make a rational decision very difficult. Many practitioners in this field know of families in which the birth of a child with a severe hereditary disorder has been endured with great trauma and stress, only to be followed by the birth of additional children with the same disorder.

DANIEL P. PERL, M.D., *Chief, Cellular Genetics Laboratory, Center for Disease Control, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education and Welfare; Clinical Instructor, Department of Pathology, Emory University School of Medicine, Atlanta, Georgia.*

One of a series of lectures in early 1971 arranged by the laboratory directors of the Rhode Island, St. Joseph's, Roger Williams General, and The Miriam Hospitals as part of the Cooperative Laboratory Program sponsored jointly by the Rhode Island Department of Health and the Regional Medical Program of the United States Department of Health, Education, and Welfare.

On the other hand, after the birth of such an affected child many parents become terrorized by the possibility that the defect may recur in subsequent offspring. They decide not to have any more children even though their desire for more children is strong. The physician involved in counseling such parents has a difficult task because until very recently he has been totally dependent upon numerical probabilities.

Within the past two or three years this situation has slowly begun to change. With the incorporation of several recently evolved laboratory techniques, we have now begun an exciting new era in the prospective recognition of hereditary disorders. Through the use of these techniques, we can approach this serious problem in a much more constructive, optimistic, and positive way than was possible in the past.

FIBROBLAST TISSUE CULTURE AND AMNIOCENTESIS

The two advances that have contributed in greatest measure to this new approach are fibroblast tissue culture and amniocentesis performed early in pregnancy.

Within the past five or six years fibroblast tissue culture has played an increasing role in the study of hereditary disorders, particularly those diseases resulting from inborn errors of metabolism. This term, first used in 1908 by Sir Archibald

(Continued on next page)

Table 1
HEREDITARY METABOLIC DISEASES DEMONSTRABLE IN TISSUE CULTURE

| |
|---|
| Acatalasemia |
| Arginosuccinic aciduria |
| Chediak-Higashi syndrome |
| Citrullinemia |
| Cystathionuria |
| Cystinosis |
| Congenital erythropoietic porphyria |
| Fabry's disease |
| Fucosidosis |
| Galactosemia |
| Gaucher's disease |
| Generalized gangliosidosis (GM ₁) |
| Glucose-6-phos. dehydrogenase deficiency |
| Glycogen storage disease (type II, III, and IV) |
| Homocystinuria |
| Hyperammonemia |
| Hyperlysinemia |
| I-Cell disease |
| Ketotic hyperglycinemia |
| Lesch-Nyhan syndrome |
| Lysosomal acid phosphatase deficiency |
| Mannosidosis |
| Maple syrup urine disease |
| Metachromatic leukodystrophy |
| Methyl malonic acidemia |
| Mucopolysaccharidosis |
| Niemann-Pick disease |
| Orotic aciduria |
| Refsum's disease |
| Tay-Sachs disease (GM ₂) |
| Xeroderma pigmentosum |

Table 2
HEREDITARY METABOLIC DISEASES SUCCESSFULLY DIAGNOSED IN UTERO

| |
|---|
| Tay-Sachs disease |
| Glycogen storage disease, Type II (Pompe's disease) |
| Galactosemia |
| Lesch-Nyhan disease |
| Niemann-Pick disease |
| Lysosomal acid phosphatase deficiency |
| Fabry's disease |
| Metachromatic leukodystrophy |
| Hurler's syndrome |
| Methyl malonic aciduria |
| Adrenogenital syndrome |

Garrod, describes a series of genetically determined diseases, usually transmitted as an autosomal recessive trait, in which a specific enzyme is defective. This defect creates a block in a metabolic pathway resulting in either a deficiency of end-product or an overload of normal or abnormally formed precursor or substrate. Many of these hereditary metabolic errors are perpetuated in fibroblast tissue culture cells, which provides an *in vitro* method for the study of their basic mechanisms.

Some of the hereditary metabolic diseases known to be expressed in fibroblast tissue culture cells are listed in Table I. The fibroblasts can be

shown to demonstrate the metabolic abnormalities of the patients from which they were derived. A wide variety of procedures for the detection of enzymatic deficiencies and abnormal metabolic products has been developed. These techniques are used both for diagnostic tests and for further research into basic mechanisms concerning these diseases. These procedures may even be used as a means of evaluating contemplated therapeutic approaches.

The chromosomes of these cells may also be studied by karyotyping in the same way as white blood cells. If the patient is suffering from any chromosomal abnormality the fibroblasts will demonstrate that abnormality on karyotype.

DIAGNOSIS IN UTERO

Within the past two or three years it has been established that at about the 14th week of gestation a small quantity of amniotic fluid may be withdrawn from a pregnant woman's uterus transabdominally with little danger of harming either mother or fetus.¹ This procedure, called amniocentesis, has been used on numerous occasions over the past several years to monitor the bilirubin content of the amniotic fluid when there is a danger of erythroblastosis fetalis; however, under such circumstances this is performed late in the third trimester.

During the 14th week of gestation a sufficient number of cells may be collected from a 5 to 10 ml sample of amniotic fluid to establish growth of these cells in tissue culture. The cells which grow from a clean amniocentesis sample are presumed to be derived from the fetus.² If fetally derived cells can be established in tissue culture sufficiently early in pregnancy, and if those cells express either the enzymatic defect or chromosomal abnormality of the fetus, then a prospective diagnosis of a fetal disorder may be made early in pregnancy.

If a severe hereditary disorder is detected early enough, the parent may then have the option of therapeutic abortion, if abortion is legal in the area. If the amniotic fluid cell culture is found to be normal, the pregnancy is allowed to pursue a normal course. While the decision would still be the prerogative of the parents they would now have the benefit of probability figures of recurrence, supplemented by definitive biochemical or chromosomal evidence of the incipient disease.

This proposition has proved to be quite prac-

tical¹⁻³, but only when specific requirements are met. The amniocentesis must be performed by an experienced obstetrician. There must be adequate facilities and trained personnel both for the establishment of a culture of the cells obtained and for the detection of the specific defect in these cells. Finally, the diagnosis must be made in time to allow safe termination of the pregnancy if an affected fetus is diagnosed.

DOWN'S SYNDROME

Of more than 450 fetuses evaluated to date by amniocentesis most were examined for the detection of gross chromosomal abnormalities. In the vast majority of these monitored pregnancies, Down's syndrome was the primary diagnostic consideration. In the most common form of Down's syndrome there are 47 chromosomes, the extra chromosome existing in the form of a trisomy of the 21 pair of the G group. Studies have shown that the incidence of this form of Down's syndrome is related to maternal age⁴. Thus, when a woman over the age of 35 years gives birth, she stands a much greater chance of having a child with this disorder than does a younger woman. The closer to menopause, the greater the frequency of Down's syndrome. The probability of having a child with Down's syndrome is about one in 80 for a woman who gives birth between the ages of 40 and 45 years⁵.

It has been proposed that amniocentesis with karyotyping of the amniotic fluid cells be offered on a widescale basis to pregnant women approaching menopausal age. This would require, however, a considerable amount of laboratory work, but the expense must be considered in relation to the current cost of caring for these children in appropriate institutions. For every child born with Down's syndrome, the average lifetime investment in institutional care has been estimated conservatively to be about \$60,000⁶ at current prices and life expectancy.

In about 2 to 3 per cent of children with Down's syndrome the chromosomal pattern is that of a 15/21 translocation. With this form of Down's syndrome amniocentesis can also be quite useful. If karyotyping is carried out in these families, individuals are found in whom most of the chromatin material of the 21 chromosome is adherent to the long arm of the 15 chromosome. This large combination chromosome is usually carried by the mother, who is clinically normal.

However, when inherited, along with two normal 21 chromosomes, the child suffers from 15/21 or D/G translocation Down's syndrome, virtually indistinguishable clinically from the more usual trisomy 21 form. A mother carrying this translocation gene will transmit Down's syndrome to one out of five of her children⁷. Because of the high probability of recurrence (one out of five), it is not uncommon for women with this type of chromosomal abnormality to have several children with Down's syndrome. With amniocentesis the chromosomes of the fetus may be evaluated early in pregnancy in order to detect the translocation Down's syndrome configuration.

SPHINGOLIPIDOSES

Amniocentesis is also quite helpful in the detection *in utero* of hereditary metabolic disorders. Table 2 lists the hereditary metabolic diseases which have been successfully diagnosed in this way. For the most part these diagnoses have been based on the detection of specific enzyme deficiencies in cultured amniotic fluid cells. Many of the diseases for which amniocentesis has been used for prenatal diagnosis fall into the category of the sphingolipidoses. These include Tay-Sachs disease, metachromatic leukodystrophy, Neimann-Pick disease, and Fabry's disease. The *in utero* diagnosis of these disorders relies primarily on the use of specific synthetic substrates with fluorometric quantitation of enzymatic activity⁸. This has proved to be a very sensitive technique for the detection in cultured cells of each of the specific enzyme deficiencies fundamental to these diseases.

O'Brien and coworkers⁹ recently monitored the pregnancies of 15 women who had previously given birth to children with Tay-Sachs disease. Amniocentesis was performed, and the activity of the specific enzyme deficient in this disorder (hexosaminidase A) was measured by the fluorometric technique in the cultured amniotic fluid cells. The enzyme activities measured were then compared with those of amniotic fluid cells cultured from normal pregnancies.

Of the 15 high-risk pregnancies tested, six fetuses were detected with marked deficiencies in hexosaminidase A and were presumed to have Tay-Sachs disease. The parents of five of the six affected fetuses elected to terminate the pregnancies. In the sixth case the diagnosis was made too late in the pregnancy for safe termination. Subse-

(Continued on next page)

quent analysis of the aborted fetal tissues in the first five cases corroborated the diagnosis of Tay-Sachs disease. The sixth child, delivered at term, has subsequently shown all of the signs and symptoms of developing Tay-Sachs disease. All of the children resulting from the remaining nine high-risk pregnancies with normal hexosaminidase A activity have shown no clinical abnormalities.

HURLER'S SYNDROME

Another disorder for which prenatal diagnosis through amniocentesis has been successful is Hurler's syndrome, a recessively transmitted form of mucopolysaccharidosis. Chondroitin sulfate B and heparatin sulfate are characteristically excreted in excessive amounts in the urine and progressively accumulate in the tissues. This cellular deposition causes gross bony deformities, growth retardation, hepatosplenomegaly, ocular cataracts, progressive mental retardation, and usually cardiac decompensation and death in late childhood because of increasing myocardial, valvular, and coronary artery involvement. While the specific enzymatic defect which causes the abnormal accumulations in the tissues has yet to be identified, most evidence points to an abnormality of intracellular degradation of the mucopolysaccharides, probably on the lysosomal level.

The basic tendency towards excessive intracellular accumulation of mucopolysaccharides in Hurler's syndrome has been used by Fratanoti *et al*,¹⁰ to detect this disease *in utero*. They cultured amniotic fluid cells from a woman who had previously given birth to a child with Hurler's syndrome. Cultures were obtained also from amniotic fluid cells of a normal pregnancy. These cultures were incubated with radioactive-labeled sulfate, and the amounts of labeled mucopolysaccharide incorporated into the cells were compared over a four day period. The differences were striking; the cells from the fetus at risk for Hurler's syndrome showed greatly increased amounts of incorporated labeled mucopolysaccharide in comparison with the normal amniotic fluid cells. The amount of labeled incorporated mucopolysaccharide in the abnormal amniotic fluid cells closely paralleled that of cultured fibroblasts from a skin biopsy of a child with Hurler's syndrome.

The mother was informed of the defective nature of the fetal cells, but elected to carry the fetus to term. She gave birth to a child who has subsequently shown all of the signs and symptoms of

Hurler's syndrome. In other instances the same techniques have been used for Hurler's syndrome, and successful termination of pregnancy has been accomplished following confirmation of the diagnosis *in utero*.

NEW TECHNIQUES SOUGHT

By using similar techniques several other hereditary metabolic disorders have been successfully diagnosed during the course of pregnancy. At the present time, in several laboratories, research is being conducted on the biochemical bases for many diseases of this type. This will undoubtedly lead to new, more efficient techniques for the prenatal diagnosis of an increasing number of hereditary disorders. *In utero* diagnostic evaluations are still available only on a very limited basis; however, with more trained personnel and the introduction of more efficient diagnostic techniques, an increasing number of laboratories will be able to make this service available to a larger segment of the population.

As yet, we cannot prevent these hereditary disorders; we cannot prevent the formation of the trisomy in Down's syndrome, or somehow "turn on" the deficient hexosaminidase A activity in a child with Tay-Sachs disease. Some segments of society have already permitted the pregnant mother the option of abortion if a severe or fatal hereditary disease has been predicted by reliable means. In the past the ethical issues surrounding abortion were always related to the acknowledged risk of sacrificing a potentially normal fetus. The techniques described here substantially diminish this risk.

Center for Disease Control, Atlanta, Georgia 30333

REFERENCES

- ¹Nadler HL, Gerbie AB: Role of amniocentesis in the intrauterine detection of genetic disorders. **New Eng J Med** 282:596-599, 12 Mar 70
- ²Jacobson CB, Barter RH: Intrauterine diagnosis and management of genetic defects. **Amer J Obstet Gynec** 99:796-807, 15 Nov 67
- ³Nadler HL: Prenatal detection of genetic defects. **J Pediat** 74:132-143, Jan 69
- ⁴Collmann RD, Stoller A: A survey of mongoloid births in Victoria, Australia, 1942-1957. **Amer J Public Health** 52:813-829, May 62
- ⁵Fabia J: Illegitimacy and Down's syndrome. **Nature** 221:1157-1158, 22 Mar 69
- ⁶Littlefield JW: Introductory remarks, chromosomal studies. **Ann NY Acad Sci** 171:379, 1970
- ⁷Solomons G: Mongolism. **Hosp Med** 5:58-69, Oct 69
- ⁸Brady RO: Prenatal diagnosis of lipid storage dis-

(Continued on Page 520)

AUTOMATION IN THE MICROBIOLOGY OF ANTIBIOTIC THERAPY

At the recent Annual Meeting of the American Society for Microbiology in Minneapolis a new instrument system was introduced described as the first successful development toward automating procedures in clinical microbiology. Through an Automated Antibiotic Susceptibility system, the new instrument system screens isolated bacterial cultures against as many as 13 routinely used antibiotics. Within three hours of introducing a sample into the system, complete test results are recorded and available to the clinician, cutting by a full day the time usually involved in selecting the antibiotic of choice for the specific treatment of an infection. Batches of bacterial cultures can be screened routinely by this procedure, at a rate of 40 cultures every hour after the initial three-hour incubation period.

The system, developed jointly by a New York instrument fabricator and Henry D. Isenberg, Ph.D. of the Long Island Jewish Medical Center, provides a significant advantage in earlier initiation of effective therapy and the consequent reduction in duration of hospitalization. Additional advantages cited include economy (about one-third the technologist time and half the material cost involved in performing the same procedures

manually), increased workload with the same staff, and elimination of calculation and interpretation steps required in manual methods.

Flexibility of testing is another advantage of the system. Each bacterial culture may be tested against 13 different antibiotics, or against different dilutions of the same therapeutic agent to determine minimum inhibitory concentration. It thus should further standardization of testing in microbiological procedures. Results obtained are said to be both highly accurate and reproducible.

Hospitals and reference laboratories perform hundreds of tests each day to determine appropriate drug therapy. Yet the procedures involved in testing still require 24-hour culture of the sample, isolation of pure bacterial colonies, and further incubation and suspension of these pure colonies before antibiotic susceptibility testing can begin. The second prolonged incubation has been eliminated, thus shortening the testing procedure by a full day. Isenberg believes that this significant step has taken us away from the "time-consuming and tedious methods of the past," and that we can now "look forward to bringing to the microbiology lab the sophistication already achieved in clinical chemistry."

WHAT EVER HAPPENED TO HOSPITAL LICENSURE?

Amid much fanfare the Rhode Island Department of Health set up a task force to rewrite the regulations for hospital licensure in Rhode Island. A large group of devoted participants including physicians of various specialties, nurses, hospital administrators, pharmacists, engineers, dietitians, social workers, medical record librarians, hospital trustees, Blue Cross representatives, and others worked long and conscientiously to draw up proposed new regulations for hospitals. Under the patient and wise guidance of Father Frederick Jellison of Woonsocket, every detail of hospital standards, medical practice, management, medical practice, procedure, and construction was consid-

ered. The regulations in general were more stringent than the standards of the Joint Commission on Accreditation of Hospitals.

Over a period of more than two years and with many hours of work, the provisions were written and rewritten until they were perfected and polished and a high degree of consensus was obtained.

Since the completion months ago of this thoroughgoing review, carried out unselfishly and without recompense, not a word has been heard.

What is the fate of this outstanding achievement? Does the silence represent indifference, bureaucratic inertia, or a political burial?

A GLIMMER OF HOPE

Although more than 55,200 men, women, and children were killed in traffic and highway accidents during 1970, there is a glimmer of hope in that this was a reduction from the 1969 death toll of 56,500.

Much of the reduction in highway deaths may be attributed to safety features which have been installed in new vehicles since 1966. In addition, there may be a growing awareness by drivers of the need for safer driving.

Excessive speed was a major factor in more than 39 per cent of the traffic deaths in 1970. Nearly half of the auto fatalities occurred during weekends, during hours of darkness, or both.

Though the number of deaths was down, the number of injuries from vehicular accidents was

up. In 1969, some 4,700,000 persons were injured on highways in the United States. In 1970, the figure jumped to 5,100,000. Also the number of fatalities over the three-day Fourth of July 1971 weekend was the highest on record.

Another fact which has not changed much in several years is that drivers under 25 years of age, who make up only one-fifth of all licensed drivers, were involved in more than one-third of all accidents, fatal and non-fatal.

Safer automobiles, continuing pressure on appropriate authorities, and acknowledgement of individual responsibility are essential to insure that we reduce significantly the number of accidents on our streets and highways.



Frank A. Seixas, M.D., Medical Director, National Council on Alcoholism, Inc. will speak on "ALCOHOLISM AND THE COMMUNITY HOSPITAL" in George Auditorium, Rhode Island Hospital at 10 a.m. Saturday, November 20, 1971.

DERMAQUIZ

Conducted by **FRANCESCO RONCHESE, M.D.**



(Left) Swelling of lip disappearing and recurring. (Right) Dry firm ring on upper lip.

Answer on Page 520

APPLICATIONS OF RADIOIMMUNOASSAY

(Continued from Page 508)

tonin. Parathyroid hormone secretion is normally stimulated by a fall in serum calcium and depressed by *hypercalcemia*. Contrariwise, calcitonin secretion is stimulated by *hypercalcemia* and suppressed by *hypocalcemia*. These relationships are experimentally demonstrable (Fig. 11).⁷

It is now clear that the proper evaluation of the significance of a given hormone concentration must take into account the concentration of the metabolic responsible for regulating the secretion of that hormone. Thus, a high plasma insulin concentration when the blood sugar is high after feeding is quite appropriate and reflective of a normal physiologic response. Indeed, if plasma insulin is not high in the presence of *hyperglycemia*, we must conclude that the insulin secretory mechanism is defective, that is, that a state of insulin deficiency exists. On the other hand, a high or even a normal plasma insulin in the presence of *hypoglycemia* must raise the suspicion of an uncontrolled autonomous secretion from an insulinoma. In contrast, since growth hormone secretion is stimulated by hypoglycemia⁹, the failure to provoke a rise in plasma growth hormone concentration by hypoglycemia suggests growth hormone deficiency, whereas a high level that fails to suppress completely after hyperglycemia has been induced must suggest hyperpituitarism⁹. By the same reasoning, a high parathyroid hormone level in association with hypercalcemia must be suspected to be the result of autonomous secretion by a parathyroid adenoma and the cause of the hypercalcemia.

To test for deficiency of hormones we not only measure plasma hormone concentrations in the basal state, but also attempt to provoke secretion with a physiologic stimulus. So, also, if we find a high hormone level in a patient suspected of harboring a hormone-secreting tumor, we evaluate whether the hormone level is appropriate or inappropriate and test the effects of physiologic suppressants to see if we can lower the hormone level.

PARATHYROID HORMONE

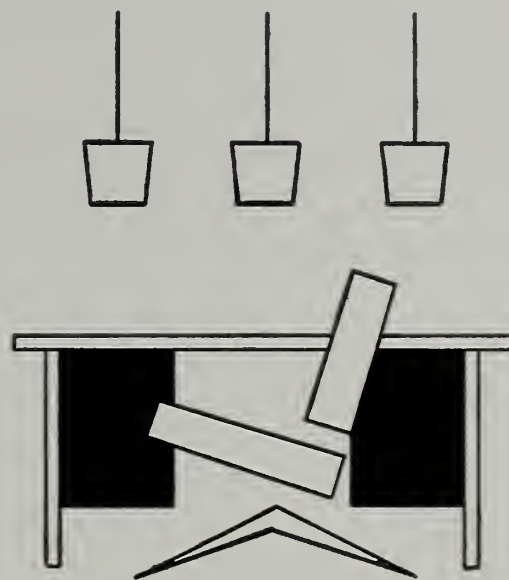
Fig. 12 compares plasma parathyroid hormone levels in normal subjects, in patients with primary hyperparathyroidism, i.e. with autonomously functioning parathyroid adenomata, and in patients with secondary hyperparathyroidism due to longstanding renal disease and hypocalcemia.¹⁰ Para-

(Continued on next page)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspec 1-5228

Scientific Sessions

presents a Seminar with a
distinguished faculty

Ala Moana Hotel, Honolulu, Hawaii

FEBRUARY 21, 22, 23, 1972

- *Electrocardiography: Model for Normal and Intraventricular Conduction Defects — Heart Block & Hemiblock: Indications for Pacing* — Peter C. Block, M.D., Cardiac Unit, Mass. General Hospital.
 - *Diagnosis, Treatment, Prevention of Specific Viral Diseases in Man* — Thomas C. Merigan, M.D., Chief Div. Infectious Diseases, Stanford Univ. Medical Center.
 - *Cancer Immunology Applied to Early Diagnosis of Tumor Growth, Detection C E A in Patient's Blood* — Phil Gold, M.D., Ph.D., F.R.C.P. (C). Montreal Gen. Hospital Div. Clinical Immunology & Allergy.
- Registration Limited
Program Director
Dr. Robert L. Pekarsky

Enclosed is my registration fee of \$175.00 (Check payable to Scientific Sessions — 217 Alexander St., Rochester, N. Y. 14607)

- ☐ Would like assistance for airline reservations
- ☐ Information on group tours
- ☐ Will make reservations with Ala Moana Hotel for Special Scientific Sessions Rates.

DR.

ADDRESS

Hopkins

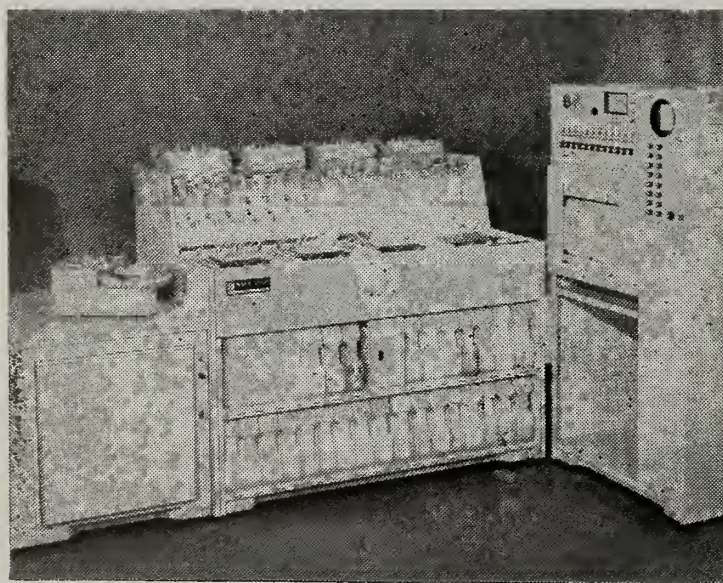
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLUCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

thyroid hormone levels are elevated in both of the latter conditions. In primary hyperparathyroidism, however, the serum *calcium* levels are also elevated. Since parathyroid hormone secretion is normally suppressed under the influence of hypercalcemia, the concomitant elevation of both serum calcium and parathyroid hormone levels indicates that the hyperparathyroidism is primary and responsible for the hypercalcemia. In the patients with chronic renal disease, however, serum calcium is below normal. Since hypocalcemia is the normal stimulus for parathyroid hormone secretion, the elevated plasma parathyroid hormone levels are quite appropriate and can be taken to represent a normal compensatory response. Thus, if we are faced with a patient who exhibits hypocalcemia, we expect his plasma parathyroid hormone concentration to be high if the parathyroid glands are normal and the hypocalcemia is due to another cause such as chronic renal disease, rickets, or a malabsorption syndrome; this is precisely what is found in such cases. If, indeed, we find a low parathyroid hormone concentration associated with hypocalcemia, the diagnosis of hypoparathyroidism is established. There are many causes of hypercalcemia other than hyperparathyroidism, among which might be mentioned sarcoidosis, multiple myeloma, hypervitaminosis D, milk-alkali syndrome, and malignant metastases to the bones, particularly from breast carcinomas. In these conditions parathyroid hormone secretion is suppressed and the hormone level in the blood is low or absent. When parathyroid hormone concentration in plasma is high in the presence of hypercalcemia, the diagnosis of primary hyperparathyroidism is virtually established. The hyperparathyroidism may be due to a parathyroid adenoma or carcinoma, or may be due to the ectopic production by certain non-parathyroid carcinomas, such as bronchogenic carcinoma or renal carcinoma.

Theoretically we might expect that, in hyperparathyroidism secondary to chronic hypocalcemia, the excessive parathyroid hormone secretion should be suppressible by restoration of serum calcium to normal or above normal levels. Indeed, this can often be demonstrated following an intravenous calcium infusion (Fig. 13). However, if the stimulus to parathyroid hyperplasia has been long sustained as a consequence of chronic hypocalcemia, the tremendous mass of parathyroid tissue (occasionally a hundred times normal) may not be

(Continued on Page 517)

APPLICATIONS OF RADIOIMMUNOASSAY

(Continued from Page 516)

totally suppressible, even by hypercalcemia. This situation is of practical importance in patients who have undergone successful renal transplantation and have restored their serum calcium to normal or above normal levels, in spite of which the continuous secretion of excess amounts of parathyroid hormone may persist for weeks or even months. In most cases the hyperplastic parathyroid tissue eventually involutes and normal calcium status may be restored. In some cases, however, what began as a compensatory hyperplasia now resembles an uncontrollable and autonomous secretion of parathyroid hormone. In spite of sustained hypercalcemia, plasma parathyroid hormone levels remain high, and subtotal parathyroidectomy may be indicated to prevent the untoward consequences of sustained hypercalcemia (Fig. 14.)¹¹

Radioimmunoassay of plasma parathyroid hormone is a useful and highly accurate diagnostic test for primary hyperparathyroidism. The results of a recent two year experience are summarized in Fig. 15.¹¹ All but three of 56 cases of surgically proven parathyroid adenomata showed elevated plasma hormone levels associated with hypercalcemia. The three exceptions showed values in the high normal range; but, in the presence of hypercalcemia, even high normal values are considered in appropriate and suggestive of hyperparathyroidism as the cause of the hypercalcemia. Of course since hyperparathyroidism can also be produced by non-parathyroid carcinomata as well as by parathyroid tumors, a thorough search must be made for carcinoma, particularly in the lungs and kidneys, before neck exploration is undertaken.

Note also in Fig. 15 the relatively high incidence of plasma hyperparathyroidism in patients with Zollinger-Ellison syndrome.

GASTRIN

A phenomenon somewhat similar to that of secondary hyperparathyroidism is seen with another hormone, gastrin, in patients with pernicious anemia or achlorhydria due to other causes. Since hydrochloric acid (HCl) normally suppresses gastrin secretion¹², the continued absence of acid and the repeated stimulation by feeding eventually produce secondary hyperplasia of gastrin-producing cells. These cells continuously hypersecrete, and

we find levels of plasma gastrin in patients with pernicious anemia fully as high as those with autonomous gastrin-producing tumors in the Zollinger-Ellison syndrome (Fig. 16).^{13, 14} Since Zollinger-Ellison patients have extraordinarily high acid secretion, the high plasma level of gastrin is completely inappropriate and indicates that the tumor is responsible for the hyperchlorhydria. In the case of the pernicious anemia patients, however, the high gastrin level is quite appropriate in view of the absence of HCl in the stomach. In the latter condition, therefore, the introduction of HCl into the stomach provokes a precipitous fall in serum gastrin concentration.¹⁴

Clearly, the radioimmunoassay of plasma gastrin concentration in patients with marked hyperchlorhydria provides a valuable diagnostic test for the Zollinger-Ellison syndrome. The values found in this condition are usually so much greater than normal that the diagnosis is rarely in doubt.

INSULIN

Another example of the diagnostic usefulness of hormone radioimmunoassay and of the need to interpret the appropriateness of the hormone level in relation to its target substance is provided in a comparison of plasma insulin levels in patients with proven islet cell adenoma and in normal subjects (Fig. 17).¹⁵ Although in about 60 per cent of the insulinoma cases at least one plasma insulin level is above the upper range of values seen in normal subjects after an overnight fast, there is overlap in the remaining cases. However, the insulinoma patients have marked hypoglycemia, and under these circumstances we should expect a near zero insulin level. When normal subjects fast for a further 48 hours to bring their blood glucose levels below 70 mg per cent, plasma insulin virtually disappears from the circulation. Thus, the finding of even a so-called *normal* plasma insulin level in the presence of marked *hypoglycemia* must be taken to indicate some degree of autonomous secretion of insulin not responding properly to the hypoglycemia and therefore strongly suggestive of insulinoma.

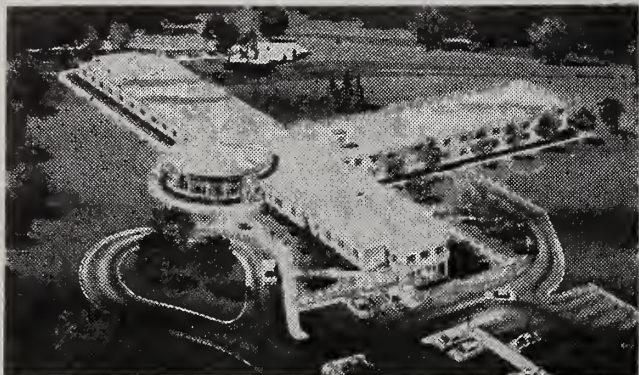
Because of rapid fluctuations in plasma levels of peptide hormones and the relationship of these fluctuations to changes in the concentrations of target substances, it is frequently important to obtain a dynamic picture of hormone secretion. For example, the response of insulin secretion to a glycemic stimulus is frequently evaluated during

(Continued on next page)

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500

Interested in Tax Free or Tax Sheltered Income ? ?

ASK ABOUT A PROGRAM FOR
YOUR PARTICULAR NEEDS.

TAX FREE BONDS
REAL ESTATE
OIL & GAS DRILLING

WHY PAY MORE TAXES
THAN YOU HAVE TO????

WILKES & CO.

**P.O. BOX 766
Warwick, R. I. 02888**

463-8110

Member National Association
of Securities Dealers Inc.

a routine glucose tolerance test. Normal subjects show a brisk rise in plasma insulin concentration, which reaches a peak in 30-60 minutes and then declines over the next hour or two (Fig. 18).¹⁶ There is a slight overshoot of the blood glucose in response to the surge of plasma insulin, and glucose concentration usually falls to slightly below basal levels at 3-4 hours, at which time the counterregulatory mechanisms take over.

In severely diabetic subjects, insulin secretion is clearly deficient and remains low throughout the glucose tolerance test.¹⁷ However, in early and mild maturity-onset diabetes we often see a different response. Here the initial secretion of insulin is sluggish, indicating an abnormality of the islet beta cell,¹⁸ but in response to the persistent hyperglycemia, insulin secretion continues and the plasma insulin concentration reaches quite high levels after 2-3 hours (Fig. 18).^{16, 18} Because of some apparent insulin resistance, blood glucose initially fails to respond with normal rapidity; but there finally is a breakthrough, and then blood glucose plummets to hypoglycemic levels. Indeed, post-prandial hypoglycemia is not an infrequent manifestation of early diabetes,¹⁹ and the explanation is evident from the kinetics of insulin secretion.

A different picture is seen in patients with so-called alimentary hyperglycemia-hypoglycemia, often associated with the dumping syndrome after gastrectomy. Here, ingested glucose empties rapidly into the small bowel and is quickly absorbed into the bloodstream. A very high blood glucose level is therefore seen early, and this is followed by a precipitous fall to hypoglycemic levels (Fig. 19).¹⁵ The hypoglycemia is a consequence of both the sharp rise in plasma insulin and the depletion of intestinal glucose, which has been so rapidly absorbed that there is little left within the bowel at 1-2 hours to buffer the early hyperinsulinism.

GROWTH HORMONE

As a final example of a commonly used radioimmunoassay in endocrine diagnosis we can consider a test for growth hormone reserve. Earlier we had indicated that the feed-back control loop for growth hormone secretion involves the level of blood glucose, that hypoglycemia is a very potent stimulus for growth hormone secretion, and that hyperglycemia is a suppressant. When hypoglycemia is produced by insulin injection into normal subjects, growth hormone secretion is enhanced within 30-60 minutes to such a level that the

plasma hormone concentrations achieved are frequently higher than in frankly acromegalic subjects (Fig. 20).⁸ The induced hypoglycemia test has proved valuable for the diagnosis of growth hormone deficiency and has been applied particularly to children of short stature and to the detection of panhypopituitarism in adults.

Space has not permitted more than a brief sampling of some physiologic applications and diagnostic uses of radioimmunoassay, but the selection presented reveals, in part, the potential scope of the method.

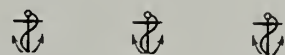
REFERENCES

- ¹Berson SA, Yalow RS, Bauman A, et al.: Insulin-¹³¹I metabolism in human subjects: demonstration of insulin binding globulin in the circulation of insulin treated subjects. **J Clin Invest** 35:170-90, Feb 56
- ²Yalow RS, Glick SM, Roth J, et al.: Radioimmunoassay of human plasma ACTH. **J Clin Endocrinol Metab** 24:1219-25, Nov 64
- ³Roth J, Glick SM, Yalow RS, et al.: Antibodies to human growth hormone (HGH) in human subjects treated with HGH. **J Clin Invest** 43:1056-65, Jun 64
- ⁴Melick RA, Gill JR, Jr, Berson SA, et al.: Antibodies and clinical resistance to parathyroid hormone. **N Engl J Med** 276:144-7, 19 Jan 67
- ⁵Walsh JH, Yalow R, Berson SA: Detection of Australia antigen and antibody by means of radioimmunoassay techniques. **J Infect Dis** 21:550-4, May 70
- ⁶Walsh, Yalow RS, Berson SA: Radioimmunoassay of Australia antigen. **Vox Sang** 19:217-24, Sep-Oct 70
- ⁷Yalow RS, Berson SA: In **7th International Congress of Clinical Chemistry** 3:108, 1970. (Hormones, Lipids and Miscellaneous)
- ⁸Roth J, Glick SM, Yalow RS, et al.: Hypoglycemia: a potent stimulus to secretion of growth hormone. **Science** 140:987-8, 31 May 63
- ⁹Roth J, Glick SM, Yalow RS, et al.: Secretion of human growth hormone: physiologic and experimental modification. **Metabolism** 12:577-9, Jul 63
- ¹⁰Berson SA, Yalow RS: Parathyroid hormone in plasma in adenomatous hyperparathyroidism, uremia, and bronchogenic carcinoma. **Science** 154:907-9 18 Nov 66
- ¹¹Berson SA, Yalow RS: Clinical applications of radioimmunoassay of plasma parathyroid hormone. **Am J Med** 50:623-29, May 71
- ¹²Woodward ER, Lyon ES, Landor J, et al.: The physiology of the gastric antrum. **Gastroenterology** 27:766-85, Dec 54
- ¹³McGuigan JE, Trudeau WL: Serum gastrin concentrations in pernicious anemia. **N Engl J Med** 282:358-61, 12 Feb 70
- ¹⁴Yalow RS, Berson SA: Radioimmunoassay of gastrin. **Gastroenterology** 58:1-14, Jan 70
- ¹⁵Yalow RS, Berson SA: Dynamics of insulin secretion in hypoglycemia. **Diabetes** 14:341-9, Jun 65
- ¹⁶Yalow RS, Berson SA: Immunoassay of endogenous plasma insulin in man. **J Clin Invest** 39:1157-75, Jul 60
- ¹⁷Berson SA, Yalow RS: Immunoassay of plasma

insulin. In Ciba Foundation Colloquia on Endocrinology, volume 14, **Immunoassay of hormones**. Boston, Little, Brown and Company, 1962. Pp. 182-211

¹⁸Yalow RS, Berson SA: Plasma insulin concentrations in nondiabetic and early diabetic subjects. **Diabetes** 9:254-60, Jul-Aug 60

¹⁹Seltzer HS, Fajans SS, Conn JW: Spontaneous hypoglycemia as an early manifestation of diabetes mellitus. **Diabetes** 5:437-42, Nov-Dec 56



E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GA Spee 1-2512

Pharmacy License No. 225

R.I.M.S. Membership . . .

5 EXCLUSIVE
GROUP INSURANCE ADVANTAGES

Income Protection Plans — four economical plans with weekly benefits beginning as early as the first day of accident or sickness . . . and paying as long as *LIFETIME* from injury and *TO AGE 75* due to illness.

Office Overhead Expense — enables you to keep your office open and retain staff while recuperating from disability . . . without diverting income protection benefits from personal or family needs.

R. A. Derosier Agency

*Group Administrator for R. I. Physicians
Since 1949 "Treating The Whole Patient"
Thru These Affiliates*

FOURDEE AGENCY, INC.

(Ind. Ins. Planning)

FOURDEE PLANNING CORP.

(NASD Broker-Dealer)

215 Waterman Ave., E. Prov. 02914

438-0660

AUTOMATION AND ITS IMPACT ON THE CLINICAL LABORATORY

(Concluded from Page 500)

patients which are well. This cannot be done until we have accurate knowledge of what the normal value of any given chemical parameter is for any given patient. Studies completed by Dr. George Z. Williams while he was at NIH, and subsequently at the Pacific Research Institute, have already revealed that the individual's normal range of blood constituents is much narrower than the average population range.

QUALITY OF OUTPUT

In my opinion, and against the back-drop of information thus far provided, the solutions to some of these problems are rather obvious. First and foremost, we must improve the quality of output of all laboratories so that the data will be meaningful to the user, that is to say the physician. In order to do this we must pay considerable attention to the manpower needs now and for the future, and train individuals at all levels, including those in technology, those in the basic sciences, and physicians in the use and application of the laboratory. If we had done this adequately in the

past it would not be necessary for the government to regulate and license laboratories as they now are doing. As far as our own Institute's aims are concerned with regard to the clinical laboratory, training programs for the clinical laboratory scientists with an insight into research methods are essential. We believe that research is important as a way of thinking and as an enticement for basic scientists working in the field of biological chemistry to be able to contribute to the solution of the problems faced by the nation's laboratories.

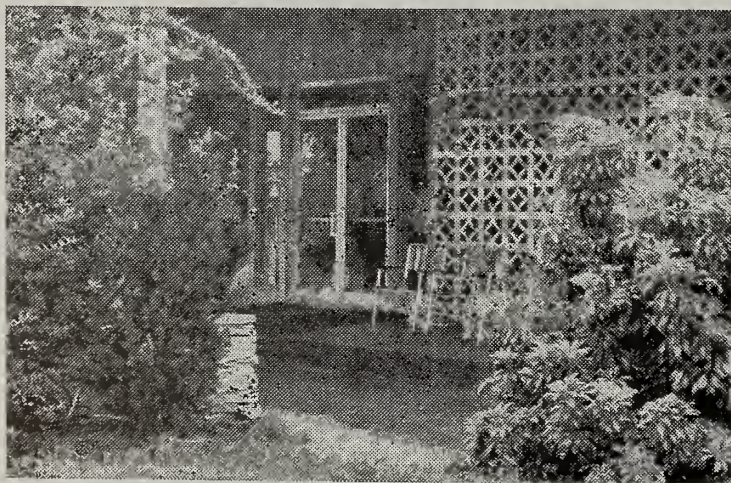
Secondly, our program in Automation in The Clinical Laboratory has as its long range goal improvement of medical diagnosis. Providing adequate laboratory service in the future will depend in a major way upon the development of more efficient chemical and biochemical methods, new micro-instruments, and appropriately automated technology. Thus, the program is aimed at developing new and refined types of separations techniques, new modalities of measurement of biological compounds, more sensitive instruments, and computer programs suitable for automated analyses of biological fluids. The National Institute of General Medical Sciences automation program is concentrating on improving the fundamental technology used by the clinical laboratory sciences which must be developed before successful automation can be accomplished.

National Institute of General Medical Science
Bethesda, Maryland 20014

HEALTH HAVENS

NURSING HOME

A Participating Extended Care Facility
In Federal Medicare



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail

East Providence

Tel. 438-4275

JCAH Accredited

PRENATAL LABORATORY DIAGNOSIS OF HEREDITARY DISORDERS

(Continued from Page 512)

eases. *Clin Chem* 16:811-815, Oct 70

⁹O'Brien JS, Okada S, Fillerup DL, et al.: Tay-Sachs disease: prenatal diagnosis. *Science* 172:61-64, 2 Apr 71

¹⁰Fratantoni JC, Neufeld EF, Uhlendorf BW, et al.: Intrauterine diagnosis of the Hurler and Hunter syndromes. *New Eng J Med* 280:686-688, 27 Mar 69

DERMAQUIZ ANSWER

(See Page 514)

(Left) Angioneurotic oedema. A urticaria phenomenon.

(Right) Trumpet player occupation mark. It was plainly visible recently on the television screen on Louis Armstrong's upper lip.

Ef- fic- iency

Dicarbosil®

ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

LUXURY OFFICE SPACE

Own your own suite in a new professional office building to be built in heart of East Side this fall. Combine a lucrative TAX SHELTER, with CAPITAL APPRECIATION potential. MINIMUM CASH INVESTMENT, with attractive FINANCING. Turn-key venture includes all interior decor, air-conditioning and parking.

Serious inquiries invited from individuals or group practices requiring 1,000 sq. ft. or more.

For further information write:

PSI 25

Almeida Avenue, East Providence

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962; Section 4369, Title 39
United States Code)

1. Date of filing September 21, 1971
2. Title of publication: *Rhode Island Medical Journal*
3. Frequency of issue: *Monthly*
4. Location of known office of publication: 106 Francis St., Providence, Providence County, Rhode Island 02903
5. Location of headquarters or general business offices of the publishers: 106 Francis St., Providence, R. I. 02903
6. Names and addresses of publisher, editor and managing editor:
Publisher: Rhode Island Medical Society, 106 Francis St., Providence, R. I. 02903
Editor: Seebert J. Goldowsky, M.D., 209 Angell St., Providence, R. I. 02906
Managing Editor: John E. Farrell, Sc.D., 106 Francis St., Providence, R. I. 02903
7. *Owner:* Rhode Island Medical Society, 106 Francis St., Providence, R. I. 02903
8. Known bondholders, mortgagees, and other security holder owning 1 percent or more of total amount of bonds, mortgages or other securities: None

9. For optional completion by publishers mailing at the regular rates (Section 132.121, Postal Service Manual)

39 U. S. C. 3626 provides in pertinent part: "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates."

In accordance with the provisions of this statute, I hereby request permission to mail the publication named in item 1 at the reduced postage rates presently authorized by 39 U. S. C. 3626.

Seebert J. Goldowsky, M.D.

10. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, Postal Manual)

The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during preceding 12 months

11. Extent and nature of circulation

| | Average Copies each issue during preceding 12 Months | Single Issue to filing date |
|---|--|--------------------------------------|
| A. Total no. of copies printed (Net Press Run) | 1,625 | 1,625 |
| B. Paid Circulation | | |
| 1. Sales through dealers and carriers, street vendors and counter sales | — | — |
| 2. Mail subscriptions | 1,309 | 1,312 |
| C. Total Paid Circulation | 1,309 | 1,312 |
| D. Free distribution by mail, car- rier or other means | | |
| 1. Samples, complimentary, and other free copies | 246 | 244 |
| 2. Copies distributed to news agents, but not sold | — | — |
| E. Total Distribution (Sum of C and D) | 1,555 | 1,556 |
| F. Office Use, Left-over, Un- accounted, Spoiled After Printing | 70 | 69 |
| G. Total, Sum of E and F— Should equal net press run shown in A) | 1,625 | 1,625 |

I certify that the statements made by me above are correct and complete.

Seebert J. Goldowsky, M.D.

THE FUTURE OF LABORATORY MEDICINE

(Concluded from Page 496)

each of these diseases can be separated by thin-layer chromatography and estimated quantitatively by gas-liquid chromatography. Urine may also be used for the measurement of φ -D-galactosidase, the absence of which identifies the infant with generalized gangliosidosis. Fluorometric estimation of hexosaminidase A activity in peripheral leucocytes is now a feasible technic. The normal control population, those clinically normal individuals heterozygous for Tay-Sachs disease and those homozygous for Tay-Sachs disease, may be clearly distinguished by this test. The female carriers of Duchenne's form of muscular dystrophy can be identified by judicious examination of certain serum enzymes. The carriers of phenylketonuria, estimated to be approximately one per

cent of the general population, may be detected by estimating their fasting plasma 1-phenylalanine concentrations. While there is some overlap between presumed normals and known heterozygotes, repeated analyses as well as employment of the 1-phenylalanine loading test can detect over 70 per cent of the carriers of this disease. The heterozygotes for hereditary galactosemia may be identified with considerable certainty by determining ι D - galactose - 1 - phosphite - uridyl transferase concentrations in circulating blood. These tests are presently expensive to perform and there is currently no social urgency to employ them in mass screening programs. However, the role of the laboratory in characterizing the genetic constitution of the individual by disclosing his lethal or semi-lethal recessive genes, carries tremendous implications in terms of family counseling, eugenics and genetic engineering.

NEW ROLE OF LABORATORY

The clinical laboratory of the future will no longer be the passive tool of the bedside clinician. Rather, it will be a major and indispensable factor governing the bedside management of the patient. The three diagnostic modalities of the physician will change in their respective importance. Classically, the taking of the medical history was paramount. Physical examination became an important secondary adjunct, and laboratory tests were used to support or deny tentatively established concepts. We are now at the threshold of an era wherein laboratory evaluation will assume increasing importance in determining diagnosis and therapeutic direction of the patient.

USE OF COMPUTERS

The computer will enter clinical medicine through a variety of doors. As it pertains to the laboratory, it will not only process and analyze data, but will make correlations, suggest additional tests, propose diagnoses, indicate drug interference and interactions, and continuously monitor such elements as blood gases, electrolytes, and circulating drug concentrations.

To an increasing degree, the future clinical laboratory will be devoted to the presymptomatic identification of disease, the recognition of inherited disorders in the fetus, the monitoring of the subtle interactions between ecological and pharmacological agents upon physiologic processes, and, finally, the mapping out of man's heretofore secret genes.

Nova Scotia — ocean front and Maine woodland

certified titles: terms. For information
write or call owners: Box 568, Bangor,
Maine (207) 942-7588 or Box 477, Digby,
Nova Scotia (902) 245-4138.

Curran & Burton DIVISION OF TEXACO INC.

1120 Eddy Street
Providence, Rhode Island

HOpkins 7-8050

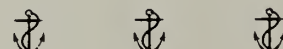
**INDUSTRIAL AND WHOLESALE
FUEL OILS**

AUTO BURGLAR ALARMS

\$7.95 up

**CUSTOM
Auto Seat Covers**

1070 Broad St., Prov. HO 1-1800



RHODE island MEDICAL JOURNAL

ABNORMAL SERUM ALKALINE PHOSPHATASE — BONE VS. LIVER

W. C. Griffiths, Ph.D., H. F. Martin, Ph.D.,
and S. J. Grivers, B.S. 539

DAY CARE CENTERS IN RHODE ISLAND STATE HOSPITALS

Elia Shammas, M.D. 541

RHODE ISLAND'S FIRST WOMAN PHYSICIAN

Seebert J. Goldowsky, M.D. 546

Masters in Medicine

THE MEDICAL HUMANISTS — LINACRE AND CAIUS

Robert V. Lewis, M.D. 550

EDITORIALS 552

DERMAQUIZ 555

DISTRICT MEDICAL SOCIETY MEETING. 536

HOUSE OF DELEGATES REPORT. 527

COVER: James Raymond Morgan (1847-1928) Fellow of the Rhode Island Medical Society, starts his rounds. "The practice of medicine was . . . almost his sole interest . . . He seemed never to think of himself except as an instrument of the profession. His one hobby was a good horse . . ." (Obit. in RIMJ 12:46-7, March 1929.)

EDITORIAL STAFF

EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of September 22, 1971

A regular meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, September 22, 1971. The meeting was called to order by the Speaker of the House, Dr. John J. Cunningham, at 8:07 p.m.

Members in attendance were: Drs. David Newhall, Carl V. Anderson, Robert E. Baute, William J. O'Rourke, John C. Osenkowski, Joseph E. Wittig, Charles S. Dotterer, Rudolf A. Jaworski, Earl J. Mara, Mary-Elaine Rohr, A. John Elliot, James A. McGrath, William J. MacDonald, Robert V. Lewis, Stephen J. Hoyer, John P. Grady, Richard Kraemer, Bertram H. Buxton, Jr., Joseph E. Caruolo, Nathan Chaset, Dominic L. Coppolino, Joseph L. Dowling, Herbert Ebner, Frank Ciunta, Herbert F. Hager, Milton W. Hamolsky, Thomas F. Head, John B. Lawlor, Robert V. Lewis, Henry M. Litchman, Thomas R. Littleton, Vincent I. MacAndrew, Peter Mathieu, Frank Merlino, Anthony J. Migliaccio, Gustavo A. Motta, Raul Nodarse, James A. Reeves, Robert P. Sarni, William R. Thompson, Seebert J. Goldowsky, Edmund T. Hackman, and Arnold Porter.

Also present were John E. Farrell, Executive Secretary, and Edward J. Lynch, Assistant Executive Secretary.

Members absent were: Drs. Harold L. Beddoe, Frederick Peirce, Jr., Richard G. Bertini, Eugene Gaudet, Joseph L. C. Ruisi, Francis L. Scarpaci, Leonard S. Staudinger, J. Gerald Lamoureux, Richard P. Sexton, John T. Barrett, Francis P. Catanzaro, George V. Coleman, John A. Dillon, Joseph D. DiMase, Frank P. Duffy, Martin E. Felder, David Freedman, Alvin G. Gendreau, Ralph F. Pike, George H. Taft, Elihu S. Wing, Jr., and Joseph E. Cannon.

REPORT FROM PROVIDENCE MEDICAL ASSOCIATION

The Speaker announced that the order of business would be altered to present a report from the Providence Medical Association.

Dr. Joseph E. Caruolo, Chairman of a special committee of the Association for a study on Delivery of Medical Care in the Future reported on the work of the Committee. and on its report to copy of which was submitted to the members of the House. He noted that the problem at present is one of continuing study, and therefore the Executive Committee submitted its report to the House to determine whether the House felt a statewide approach would be advisable, whether the Association Committee, or a State Society Committee should continue an ongoing study, and whether the principle of a medical foundation was receptive to the House.

Mr. Charles P. Williamson, Legal Counsel, discussed the report which included a memorandum from his staff on Medical Foundations, and also a draft of the type of legislation that would be advisable if a Foundation Program was found to be feasible and desirable.

Members of the House discussed various aspects of the issue as presented.

Action: A motion was made, and seconded, that the House of Delegates approve of the report from the Providence Medical Association, and that a statewide approach to the issues involved be made, that the President of the Society be authorized to name a committee for an ongoing study of all facets of the issues, and the principle of a Medical Foundation be approved.

* * *

A motion was made to amend whereby approval of the principle of a Medical Foundation be deleted. The motion to amend was defeated.

The original motion was voted.

* * *

URBAN OBSERVATORY PROGRAM

The Speaker stated that the President would address the House regarding the Urban Observatory program.

(Continued On Next Page)

Doctor MacDonald stated that the Urban Observatory of Rhode Island was established with a grant from Title I of the Higher Education Act, and it consists of representatives of eight Rhode Island colleges and universities. It has as its essential purpose to focus the many talents of the academic community upon current urban problems. He stated the organization had undertaken to promote discussion of health issues as its first project, and he read extracts from a copy of its brochure titled "Getting Sick Is Getting Better" which is currently being distributed to the general public.

Doctor MacDonald stated that his attention had been called by many members to the attacks on private practice of medicine implied in the brochure, and that action by the Society was warranted. He read a letter which he proposed should be sent to the presidents of the eight colleges and universities sponsoring Urban Observatory. Members of the House discussed the brochure.

Action: A motion was made, seconded and voted that the House record its objection to the Urban Observatory brochure, and that the President direct a letter, as presented, to the

presidents of the colleges and universities involved, and that copy also be sent to the Secretary of Health, Education and Welfare, and to the members of the Rhode Island Congressional delegation.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the March meeting of the House had been printed and distributed by the Secretary.

Action: A motion was made, seconded and voted that the minutes of the March 24, 1971 meeting of the House of Delegates be approved as presented.

REPORT OF THE SECRETARY

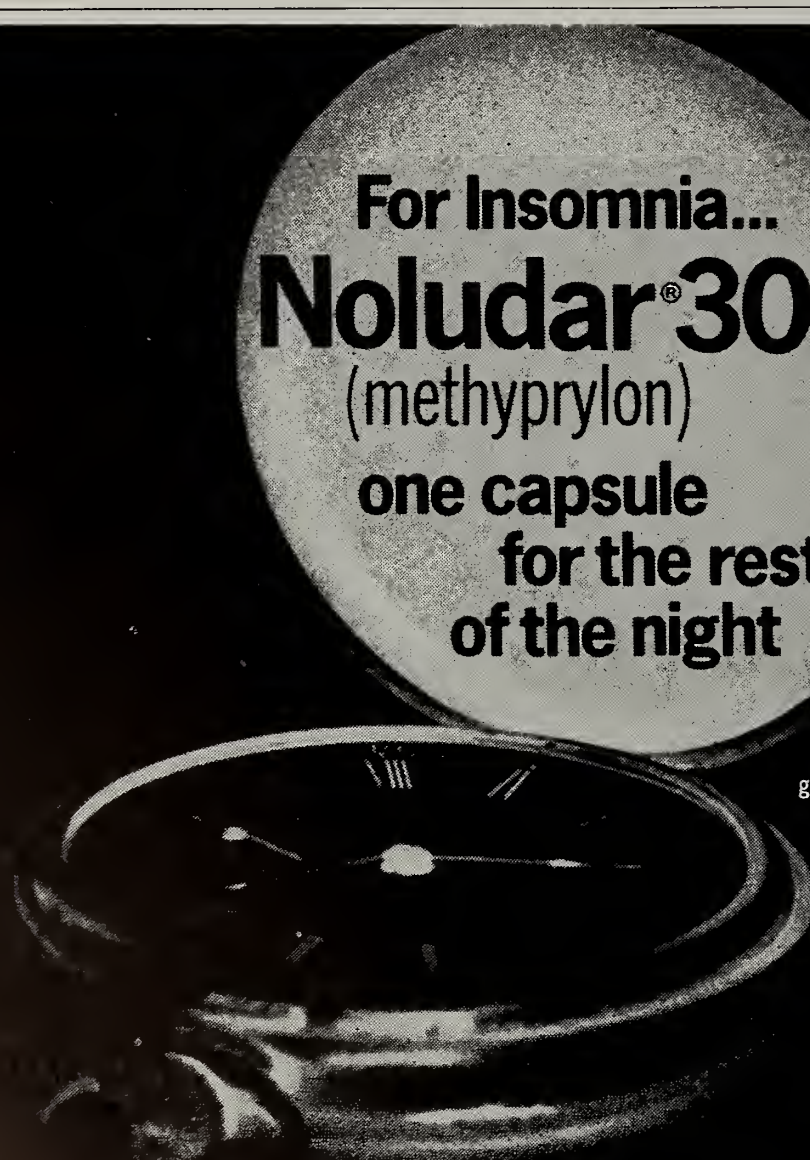
The Secretary noted that his report was included in the handbook.

Action and comment on specific items follow:

1. *Chamber of Commerce Survey*

Dr. Peter Mathieu reported on the survey on national health issues conducted by the U. S. Chamber of Commerce whereby local chambers acted on eleven proposals through their Health

(Continued On Page 529)



For Insomnia...
Noludar® 300
(methypylon)
**one capsule
for the rest
of the night**

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methypylon.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

HOUSE OF DELEGATES REPORT

(Continued From Page 528)

Councils. He cited the efforts of Elihu S. Wing, in addition to Dr. J. P. Eddy and himself as members of the Providence Chamber's Health Council which acted on the issues.

2. *White House Conference on Aging*

Dr. Richard J. Kraemer, Chairman of the Society's Committee on Aging, and designated by Governor Licht as one of the official Rhode Island delegates to the White House Conference on Aging, discussed the AMA position on the issues involved, and he cited the work of the Rhode Island Committee. He also reported that he had testified at the U. S. Senate hearing held in Providence under the chairmanship of Senator Pell on September 20. He called attention to recent newspaper stories on Medicaid and Medicare, and he urged greater physician participation in the care of patients under these programs.

6. *Bylaw Revisions*

Dr. William J. MacDonald explained the bylaw revisions drafted and approved by the Council for consideration of the House. Various provisions proposed for change were discussed by members of the House.

Action: A motion was made, seconded and voted that the bylaw revisions as submitted by the Council be approved and submitted to the membership at the next regular meeting of the Society.

* * *

Action: A motion was made, seconded and voted that the report of the Secretary, as a whole, be approved and placed on record.

REPORT OF THE TREASURER

Dr. John P. Grady, Treasurer, noted that his report was included in the handbook for the meeting. He read parts of the report, and explained in detail the changing financial picture which has resulted in the depletion of cash reserves, and he noted that the budget proposed for 1972 called for a higher income, through dues or otherwise, than was currently anticipated.

Action: A motion was made, seconded and voted that the report of the Treasurer, as submitted, be approved and placed on record.

COUNCIL RECOMMENDATIONS

Dr. Stephen J. Hoyer, Secretary, presented recommendations from the Council, and the following actions were taken:

1. *Benevolence Fund Trustee*

(Continued On Next Page)

Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Each Berocca Tablet contains:

| | |
|----------------------------|--------|
| Thiamine mononitrate. | 15 mg |
| Riboflavin. | 15 mg |
| Pyridoxine HCl. | 5 mg |
| Niacinamide. | 100 mg |
| Calcium pantothenate. | 20 mg |
| Cyanocobalamin. | 5 mcg |
| Folic acid. | 0.5 mg |
| Ascorbic acid. | 500 mg |

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B₁₂.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

in alcoholism

**Berocca[®] tablets
is therapy**

With balanced, high potency
B-complex and C vitamins.
No odor.
Virtually no aftertaste.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The House elected Dr. Alfred L. Potter for a three-year term, until 1974, as a trustee of the Benevolence Fund.

2. Budget and Dues for 1972

The House approved the proposed budget for 1972, and voted that the annual dues for active member in practice more than a year be \$100 in 1972, and for members in the first year of practice, \$50.

3. Bylaw Revisions

As noted above, the House approved of the by-law revisions proposed by the Council.

4. Brown Medical School

The House voted to urge Brown University to proceed as promptly as possible in the full implementation of its plans for a degree granting medical school at the University.

RESOLUTIONS

The Secretary presented two resolutions, as submitted to the House in the handbook for the meeting, one from the Rhode Island Chapter of the American Academy of Pediatrics, and one offered by Dr. Seebert J. Goldowsky relative to peer review.

Action: A motion was made, seconded and voted that the House endorse the resolution from the Rhode Island Chapter of the American Academy of Pediatrics supporting the eradication of the 14-day exclusion clause from all health insurance policies sold in the State.

* * *

Action: A motion was made, seconded and voted that the House approve of the resolution submitted by Dr. Goldowsky calling for a special study committee, to be named by the President of the Society, to review the peer review mechanism of county and specialty societies, and to recommend guidelines, channels, and points of entry for various types of inquiry or requests for opinion.

COMMITTEE REPORTS

The Speaker noted that several of the committee reports were for information purpose only, and called for no special action by the House. He asked for a motion to receive and file such reports.

Action: A motion was made, seconded and voted that the reports of the committees on Child-School Health, Medical Aspects of Sports, Disaster, Maternal Health, Continuing Medical Education, and Public Laws be received and placed on record.

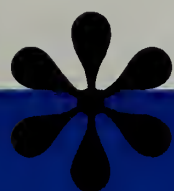
REPORT ON NURSING

The Speaker noted that the report of the Nursing Committee was a Joint Statement on the Functions of the Registered Professional
(Continued On Page 532)

**IN ASTHMA
IN EMPHYSEMA**



*optional
therapy*



THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula

First choice

MUDRANE-2

*When ephedrine is too exciting
or is contraindicated*

MUDRANE GG

*During pregnancy or when K.I. is
contraindicated or not tolerated*

MUDRANE GG-2

A counterpart for Mudrane-2

MUDRANE GG ELIXIR

*For pediatric use
or where liquids are preferred*

*Clinical specimens
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals





Still serving...

Miltown[®]
(meprobamate)

WALLACE PHARMACEUTICALS 
Cranbury, N.J. 08512

HOUSE OF DELEGATES REPORT

(Continued From Page 530)

Nurse which has been approved by the Rhode Island Nurses' Association Board of Directors, and endorsed by the Hospital Association of Rhode Island, and the committee on Nursing of the Rhode Island Medical Society which now asks that the House endorse the statement.

Action: A motion was made, seconded, and voted to endorse the joint statement on nursing as published in the handbook.

REPORT ON PHYSICIANS SERVICE

Dr. Arnold Porter, President of Physician Service, noted that reports of the board meetings, and Committee reports, had been included in the handbook for the information of members of the House. He stated he would answer any questions regarding actions taken.

He called to the attention of the House that the Blue Shield Plan would be host to the members and their wives at a Professional Relations Conference to be held in Newport the last weekend in October, and he urged members to attend.

He also called attention to the inclusion in the handbook of court opinion obtained by the Plans relative to the rate increase for the 65 Plan.

REPORT OF AMA DELEGATE

Dr. Edmund T. Hackman, the Society's delegate to the AMA, reported on the highlights of the meeting of the AMA House of Delegates at the annual meeting held in Atlantic City in June, 1971. He discussed the elections held, the address to the House by President Nixon, bylaw changes relating to interns and residents, policies on drug abuse and the request that physicians be urged to restrict the prescribing of amphetamines as much as possible, definitions adopted regarding allied health personnel, and the development of long range planning objectives of the Association.

LEGISLATION RELATIVE TO AMBULANCE VEHICLES

Dr. Frank Merlino inquired why the Society opposed, as noted in the Public Laws report, a bill (H 1763) that would require that ambulance, rescue vehicles and other emergency vehicles transporting a person to a hospital shall convey the person to the hospital of his choice. Members agreed that the Society should not, and was not opposed to such legislation.

ADJOURNMENT

The meeting was adjourned at 10:55 p.m.

Respectfully submitted:
STEPHEN J. HOYE, M.D.
Secretary

(Continued On Page 533)

HOUSE OF DELEGATES REPORT

(Continued From Page 532)

REPORT OF THE SECRETARY

Stephen J. Hoye, M.D.

The Council has held two meetings since the previous meeting of the House of Delegates at which the following were among major matters considered:

1. It was informed that members of the Society active with the local chapters of the U. S. Chamber of Commerce, particularly Drs. Peter L. Mathieu and Jesse P. Eddy, III, served on study groups that considered a U. S. Chamber proposal regarding national health insurance.

2. It was notified that the Governor had named Dr. Richard J. Kraemer, vice president of the Society, as one of the official Rhode Island delegates to the White House Conference on Aging.

3. A report was given that the Society, through the executive office, had protested to the state director of business regulation the proposed 59% raise in professional liability insurance rates requested by the Aetna Insurance Company, and that the Company had subsequently been requested to supply further details on the issue.

4. A voluminous report on the work of the Tri-State Regional Medical Program was received and reviewed.

5. Support was given the proposed Conference on Continuing Education to be held under the co-sponsorship of the Society at Newport on September 18.

6. The President was authorized to name a bylaws revision committee which was asked to give particular attention to the newly-enacted AMA provision for intern and resident membership by direct application where the state medical society does not include such membership in its bylaws.

7. The following were named as the Society's representatives on the Medical Economics Council: Drs. Stanley D. Simon, John J. Cunningham, Philip J. Morrison, Charles B. Round, Robert V. Lewis, and Thomas Perry.

8. A report on the activities of the General Assembly on health and welfare legislation was received and reviewed, and a summary report approved for mailing to district society officers and the members of the House.

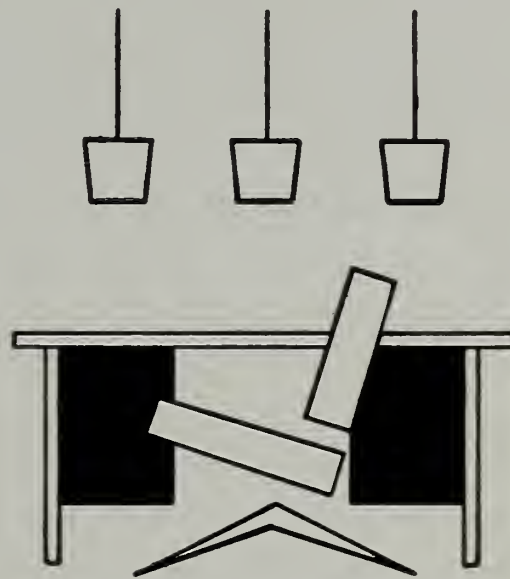
9. The Council was informed of a meeting held by the officers of the Society with the officers of the Hospital Association of Rhode Island to discuss mutual problems.

(Continued On Next Page)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

Con- ven- ience!

Dicarbosil®

ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Hopkins

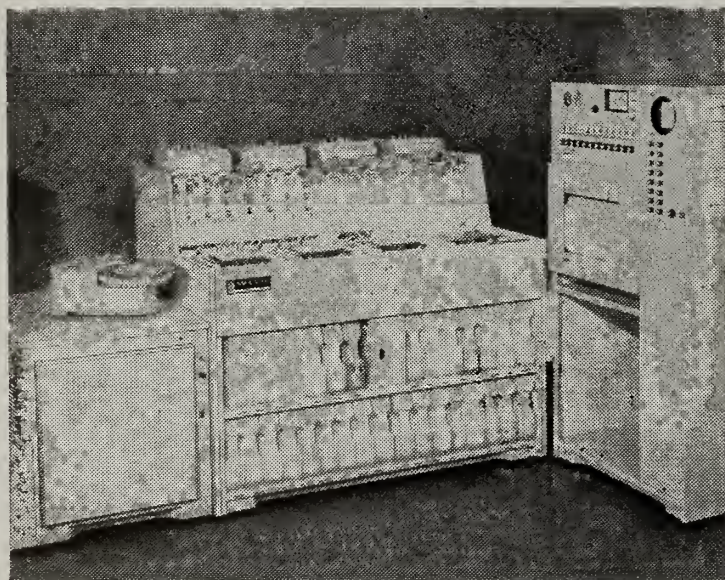
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

**ALL 20 PROCEDURES
\$15.00**



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

10. A report on a poll of the membership relative to the treatment of venereal disease was approved for transmittal to the state health department.

11. The appointment of Dr. Frank Sullivan as an alternate member of the Mediation Committee was approved.

12. Approval was given of the appointment by the President, as authorized under the bylaws, of Roger Fontaine, M.D., of Woonsocket, as trustee-at-large to the Board of Trustees of the Rhode Island Medical Society Library.

13. The appointment of Dr. Betty Mathieu as the Society's delegate to the AMA National Conference on Physicians and Schools was approved.

14. The Rhode Island Health Services Research Corporation was given permission to use the Medical Library auditorium for a meeting on the morning of September 27 on Ambulatory Medical Care in Rhode Island.

15. A report on medical and surgical occupancy rates in Rhode Island hospitals, submitted by Dr. Alex M. Burgess, Jr., Chief of Planning and Standards of the State Health Department, and reports on actual and expected average stays in hospitals, and on the use of radiation therapy at Boston area hospitals by Rhode Island residents, were reviewed by the Council and are submitted to the House for its information.

16. The appointment by the President of Dr. Henry Izeman to serve on the Home Care Committee of the Health Planning Council was approved.

17. The President reported that he and the Executive Secretary had met with the State Director of Business Regulation at a hearing on proposed malpractice insurance rates submitted by the Aetna Insurance Company.

18. The Council referred to the House a joint statement of Outlines on the Functions of the Registered Professional Nurse as a report from the Nursing Committee.

19. The Judicial Council of the American Medical Association has listed Guidelines for Automated Multiphasic Health Testing Programs. (See Page 556 Appendix C.)

20. The President reported that he, Dr. R. P. Sexton and Mr. Farrell had met with Colonel E. V. Allen, contracting officer for the Office of Civilian Health and Medical Program of the Uniformed Services. Highlights of the discussion, as reported to the Council, were:

(Continued On Page 535)

HOUSE OF DELEGATES REPORT

(Continued From Page 534)

"He informed us that eligible beneficiaries may go anywhere for outpatient care, but for inpatient care not in a residence (Army, Navy Air Force) facility, a certificate is required from the ranking authority. However, it is expected that the residency regulation, already dropped by the Air Force, may prevail for the other branches of the Uniformed Services.

"Physician fees are on the usual and customary basis, and have been evolved by Mutual on the basis of years of filings by physicians. A physician updating his profile of fees should notify Mutual, at the same time he does the local Blue Shield. Every effort has been made to eliminate fee decisions by the military, and the fiscal agent is left the task, and urged to contact the peer review committee of the medical society is a problem arises. The major problem currently is that of psychiatric care which is difficult to evaluate as many psychiatrists see their patients more often than other physicians do. The American Psychiatric Association and CHAMPUS are working on solutions to the problem.

"Efforts are being made to simplify the claim

form, to provide adequate coverage, and to pay the claim as promptly as possible. Mutual will send a representative to Rhode Island if there is a request at any time for an explanation of the program.

"According to CHAMPUS data hospital costs are up from \$300 average to \$450, while physicians fees have gone from a \$110 average to \$120."

21. A comprehensive report on the work of the Tri State Regional Medical Program was submitted last Spring, and reviewed by the Council at its summer meeting.

22. The President was authorized to appoint a Long Range Planning Committee to consider the role of the Society in the years ahead, particularly in view of national health insurance proposals, the operation of pilot programs locally of new health care delivery systems, and the possibility of reorganization of committee structure, and the executive office.

23. A request of State Health Department Officials to discuss the VD problems in Rhode Island was referred to the Child-School Health Committee.

* * *

(Continued On Page 556)

For Insomnia...one capsule for the rest of the night

NOLUDAR[®]

(methypylon)



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methypylon.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

District Medical Society Meeting

WASHINGTON COUNTY MEDICAL SOCIETY

The quarterly meeting of the Washington County Medical Society was held on April 14, 1971, at the Swiss Chalet in Westerly, Rhode Island.

The meeting was called to order by Dr. Mauricio Golberg, President, at 11:35 a.m. Members present were Drs. F. Bruno Agnelli, Gregory Burbelo, Pasquale Celestino, Ernesto D'Agostino, J. Merrill Gibson, Mauricio Golberg, Linwood Johnson, Sidney Johnston, Valentin Klymenko, Robert Knisley, Bohdan Kusma, Attilio Manganaro, John L. MacIver, James McGrath, Gordon Menzies, Louis Morrone, Samuel Nathans, Joseph O'Neill, Francis Palaia, Mildred Robinson, Ziang Tsien Tang, Juliana Tatum, William Tully, John Walsh Johanna Mohrnhelm, and Richard Judkins.

A motion was made by Dr. Samuel Nathans and seconded by Dr. Louis Morrone that the minutes of the last quarterly meeting be accepted as printed and distributed without being read.

COMMUNICATIONS

Some communications were read.

The Society wished to be placed on record as being in favor of General Assembly Bill H 2064, which was a bill exempting doctors, hospitals, blood banks, and hospital personnel involved in blood transfusions and donations from liability for damages except for negligence and willful misconduct.

AUTO BURGLAR ALARMS

\$7.95 up

CUSTOM Auto Seat Covers

1070 Broad St., Prov. HO 1-1800

Doctor Morrone suggested a telegram be sent to the Chairman, Mr. John Skiffington, stating our position in favor of getting the bill out of the committee.

COMMITTEE REPORTS

Dr. Richard Kraemer reported on the follow

- Brown's Medical Science Program;
- FLEX examinations will be given by the State for State licensure;
- Medical Economics concerning charges for X-ray and Lab;
- Pfizer's Lab will have a clinic for V.D.

OLD BUSINESS

The following members were accepted by the Society:

- Dr. Roger Ashley
- Dr. James H. Derby
- Dr. William Jones
- Dr. Harold Falconer
- Dr. John F. Brady

Dr. Juliana Tatum gave a report concerning the Washington County Mental Health Clinic — ground was being broken for their new building and progress is being made. The Clinic is running very smoothly.

The stock held by the Society will be transferred to the Mental Health Clinic via the Washington Trust Company.

NEW BUSINESS

On the election of Doctor Kraemer to the position of Vice-President of the Rhode Island Medical Society, the Society has a delegate opening on the State Society Council. The Nominating Committee proposed that Dr. F. Bruno Agnelli be the County Society's new member and Dr. A. John Elliot be the Society's new member to the House of Delegates. Doctor Morrone so moved and it was seconded by Dr. J. Merrill Gibson.

The meeting was adjourned at 12:30 p.m. Dr. John Yashar presented an interesting program with slides bringing us new advances in Cardiac Surgery being done today.

Respectfully submitted:

FRANCIS M. PALAIA, M.D. Secretary

Abnormal Serum Alkaline Phosphatase - Bone vs Liver

Authors Describe Method For Distinguishing Skeletal From Liver Disorders As Source Of High Serum Alkaline Phosphatase

By W. C. Griffiths, Ph.D., H. F. Martin, Ph.D.,
and S. J. Grivers, B.S.

The alkaline phosphatases are distributed widely among the tissues of the human body.¹ In spite of this fact, and the lack of secure knowledge concerning the source of normal serum alkaline phosphatase, the test remains useful diagnostically.² On occasion, it becomes necessary to identify the source of an abnormally high level of serum alkaline phosphatase. Except in pregnancy, this source will most probably be liver or bone.²

Several technical approaches have been (and are being) made toward developing a testing system which can distinguish these two fractions of alkaline phosphatase. Electrophoresis of the serum followed by a specific colorimetric reaction has been one of these.^{3, 4} Unfortunately, in the electrophoretic systems presently available, the liver and bone isoenzymes have similar and overlapping electrophoretic mobilities.¹

A second approach has been to use the different thermostability of the two isoenzymes as a dis-

tinguishing method.^{5, 9} In general, the isoenzyme from bone is more subject to heat denaturation than is the isoenzyme from liver. Consequently a distinction can be made after heating a patient's serum at a given temperature for a given time by measuring the enzyme activity remaining. However, there is some overlap in per cent activity remaining in liver dysfunctions, normal values, and skeletal disease.⁶

A third method has been the measurement of 5' nucleotidase activity, which is reportedly elevated only in cases of hepatobiliary disorders.⁷ However, the test is somewhat subject to false negatives, and occasionally produces abnormal values in bone disorders.⁸

CASE REPORTS

We wish to report our experience in using a combination of alkaline phosphatase heat inactivation and 5' nucleotidase activity in distinguishing bone from liver as a source of abnormally high alkaline phosphatase. Table I includes 12 cases in which the diagnosis became quite certain by criteria other than the clinical laboratory tests. Our normal value for 5' nucleotidase has been established as 0-15 units. Our criteria for decision making in the heat inactivation procedure are

(Continued On Next Page)

W. C. GRIFFITHS, Ph.D., *Organic Chemist at Rhode Island Hospital, Providence.*

H. F. MARTIN, Ph.D., *Head of Biochemistry Department at Rhode Island Hospital, Pathology.*

S. J. GRIVERS, B.S., *a senior technologist at Rhode Island Hospital, Pathology.*

Table I

| Patient | Alk. Phos (KAU) | 5'Nuc | Alk. Phos % remaining after heating | Source of Alk. Phos | Diagnosis |
|------------|--------------------|-------|---|------------------------|---------------------------------------|
| T. H. | 180 | 242 | 35% | liver | hepatitis |
| T. T. | 25 | 38 | 40% | liver | esophageal stenosis enlarged liver |
| W. B. | 14 | 6 | 34% | normal | gastritis |
| F. V. | 15 | 272 | 48% | liver | metastatic cancer |
| D. N. | 15 | 2 | 25% | normal | diabetes mellitus |
| B. R. | 72 | 12 | 13% | bone | Paget's disease |
| I. S. | 29 | 54 | 49% | liver | fatty liver (biopsy) |
| J. P. | 60 | 5 | 6% | bone | liver found normal |
| C. D. | 22 | 66 | 34% | liver | metastatic cancer |
| O. B. | 15 | 40 | 34% | liver | hepatitis |
| K. R. | 117 | 0 | 3% | bone | osteogenesis carcinoma |
| J. J. | 64 | 19 | 25% | liver | metastatic cancer |

that if less than 20 per cent activity remains after heating at 50°C for 30 minutes, then the source of the high alkaline phosphatase activity is probably bone. If more than 20 per cent activity remains, the source is liver.

DISCUSSION

The interesting result of our study was the good agreement between the two procedures. This makes the practice of employing both methods most valuable in cases where the result in one or both cases is borderline, since available literature indicates that both are somewhat equivocal. Also, where disease is involved, the employment of both methods insures that one is looking for positive (different from normal) result in one of the procedures. The heat inactivation procedure yields an abnormal result in bone pathology, whereas the 5' nucleotidase assay is abnormal in liver disorders. This is more satisfying to us than the positive vs. negative approach of a single procedure.

REFERENCES

¹Wilkinson JH: Clinical significance of enzyme ac-

tivity measurements. **Clin Chem** 16:882-890, Nov 70

²Searcy RL: **Diagnostic biochemistry**. New York, McGraw-Hill, 1969. Pp. 41-47

³Nordentoft-Jensen B: Differentiation between the electrophoretic pattern of serum alkaline phosphatase in bone disease and in liver disease. **Clin Sci** 26:299-305, Apr 64

⁴Romel WC, LaMancusa SJ, DuFrene JK: Detection of serum alkaline phosphatase isoenzymes with phenolphthalein monophosphate following cellulose acetate electrophoresis. **Clin Chem** 14:47-57, Jan 68

⁵Posen S, Neale FC, Clubb JS: Heat inactivation in the study of human alkaline phosphatases. **Ann Intern Med** 62:1234-1243, Jun 65

⁶FitzGerald MX, Fennelly JJ, McGeeney K: The value of differential alkaline phosphatase thermostability in clinical diagnosis. **Amer J Clin Path** 51:194-201, Feb 69

⁷Belfield A, Ellis G, Goldberg DM: A specific colorimetric 5'-nucleotidase assay utilizing the Berthelot reaction. **Clin Chem** 16:396-401, May 70

⁸Belfield A, Goldberg DM: Application of a continuous spectrophotometric assay for 5'-nucleotidase activity in normal subjects and patients with liver and bone disease. **Clin Chem** 15:931-939, Oct 69

⁹Sagar S: Thermolability of alkaline phosphatase in evaluation of renal osteodystrophy. **Nephron** 8:270-277, March 1971



Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.

RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

Day Care Centers In Rhode Island State Hospitals

Day Hospital Programs For Mental Patients Shortens Treatment And Is Practical, Economical, And Efficient

By Elia Shammass, M.D.

The Rhode Island Medical Center Institute of Mental Health (I.M.H.) established its first day care center in 1964. Thus began the program that seeks to integrate the prevention, treatment, and rehabilitation of the acutely ill mental patient by retaining his contact with his social environment (*i.e.*, his family and his friends) outside and inside the hospital. The day care patient goes home at night and returns to the hospital the next morning. This is more beneficial than the boredom, over-protection, and extended confinement in the isolated mental hospital.¹

National dissatisfaction with treatment in mental hospitals had led to establishment by Congress of the Joint Commission on Mental Health in 1955. A program implemented by Public Law 88-164, the Mental Retardation Facilities and Community Mental Health Centers Act passed by Congress in 1963, provided \$329 million to help build the health centers and develop programs for the mentally retarded. Program-planning funds were also available from the Department of Health, Education, and Welfare on a matching fund basis.

ELIA SHAMMAS, M.D., *Medical Director, Cranston Community Mental Health Clinic; Director, Day Care Program, Institute of Mental Health, Rhode Island Medical Center and Charles V. Chapin Hospital.*

Fortuitously, the psychotropic drug breakthrough had occurred during the Commission's study and made possible treatment of seriously disturbed patients within the community rather than in custodial institutions.² In addition, psychiatric concepts changed after World War II to utilize, for example, interpersonal relationships, family and group dynamics, communication, social roles, and individual and cultural differences.³

By caring for the acutely mentally ill in community health centers, it is possible to obtain a significant reduction of cost of psychiatric services by averting hospitalization or shortening it; for example, one shift of nurses suffices, no beds are required because the patient returns home at night, and only one meal need be prepared and served. Some centers have reported that for 50 per cent of their patients who appeared destined for hospitalization when referred day care centers have provided an alternative.²

THE RHODE ISLAND PROGRAM

The federal grant that financed the Rhode Island day care program expired in June 1968, but the hospital administration has continued its policy of early treatment, thus avoiding hospitalization, and helping in the transition from custodial care to therapeutic community. Further, on November 17, 1969, I.M.H. established another

(Continued On Next Page)

day care center in Providence at its subsidiary, the Charles V. Chapin Hospital, also to provide supervised psychiatric care and work and recreational programs for its patients who live at home.

These two state-supported day care centers serve the entire state population of 922,461 centered mainly around Providence.⁴ Patients living in Providence and the northern part of the state are admitted to the Chapin Day Hospital; those in the Southern part, to the I.M.H. Day Hospital. Since the entire state is only 44 miles long and 35 miles wide,⁵ patient-travel distance to either center is short, a situation that simplifies organization and financial support.⁶

The centers have continued to improve and expand their contacts with social agencies that are involved in care of the mentally ill in communities throughout the state. They maintain coordination and communication with community mental health centers, the community workshop in Cranston supported by the United Fund and workshops at the Trudeau and eight other centers for the retarded, State Welfare offices, the State Division of Vocational Rehabilitation, and public health nurses, all of which can provide continuity of patient care. As a result, a steady stream of patients has been referred to the day care centers directly from the community, *i.e.*, from the patient's own physician, private psychiatrists, general hospitals, and social agencies.

SCREENING PATIENTS

All of the patients referred to the State Hospital are kept on Hold in the Receiving and Screening Unit at the Charles V. Chapin Hospital for evaluation the following day by the Screening Team made up of a clinical director, an experienced social worker, a psychiatric nurse, and a secretary.

The evaluating team initiates a plan of treatment based on needs and available community services. When psychiatric and social evaluation reveals need of supervision and relatively intense therapy, but not inpatient hospitalization, the patient is referred to one of the day hospitals. The social-therapeutic setting helps him develop more effective coping mechanisms and reinforces the healthy factors in his behavior patterns.

During the initial 12 months beginning October 1969, there were 2,259 screening conferences. While detailed statistics of referral to community clinic resources were not kept in the early months of the Receiving and Screening Units, 917 of these

patients were referred to various community agencies. Thirty-five patients were referred to the I.M.H. Day Care Center and 65 to the Charles V. Chapin Hospital Day Care Center. Psychiatric hospital inpatients about to be discharged also are referred to one of the day hospitals as "guests."

Admissions from the community and psychiatric hospitals are summarized in Tables I and II. Most day hospital patients at Rhode Island Medical Center from 1964 through 1970 had schizophrenia or psychosis, and 64 per cent of the 769 were inservice patients. Of the total discharged, 61 per cent went back to the community.

At Chapin Day Hospital in the nine months beginning November 1969, 83 per cent of the patients received had neurosis or psychosis. Admissions (65 from the community) totaled 91, discharges to the community 52, and inservice transfers 11.

Patients sign in on a daily attendance sheet, usually five days a week for about seven hours a day. They are divided into three to five groups of up to 15 persons, depending on the patient population. This procedure lessens emotional isolation, prevents an incongruous mixture of patients, and provides each with a peer group to whom he can relate. The group also helps the patient develop a positive self-image and offers a daily opportunity for maturation and growth. It gives him a sense of belonging, an *esprit de corps* particularly obvious among adolescents. Each group is assigned a staff psychiatrist, two or three staff leaders, usually a social worker or registered nurse, and two psychiatric aides. In addition, individual supportive psychotherapy is provided. Medication is dispensed by the nurse from a supply kept in the ward and, along with participation in the program, is free of charge.

ROLE OF THE SOCIAL WORKER

The social worker plays a relatively new role in therapy of the mentally ill that begins early in the day care program. It is he who introduces the new patient to the personnel and orients him and his family to the program. Among other things, he explains to the family its responsibilities and the necessity for its consistent cooperation both at home and at the day care unit. He arranges the patient's schedule of attendance, in consultation with the psychiatrist and the supervising nurse, and ascertains the means of transportation to and from the unit.

Initially the patient is faced with the task of

TABLE I

Patients Admitted to and Discharged from Rhode Island Medical Center Day Care Center

| Diagnoses | Admissions from Community | | | | Admissions from Inservice | | | |
|----------------------------------|---------------------------|--------|--------|-------|---------------------------|--------|--------|-------|
| | 1964-66 | '66-68 | '68-70 | Total | 1964-66 | '66-68 | '68-70 | Total |
| Schizophrenia or psychosis | 55 | 34 | 48 | 137 | 141 | 122 | 62 | 325 |
| Neurosis | 18 | 13 | 35 | 66 | 27 | 41 | 20 | 88 |
| Personality disorder | 15 | 3 | 2 | 20 | 16 | 10 | 9 | 35 |
| Adjustment reaction | 7 | 6 | 21 | 34 | 6 | 4 | 11 | 21 |
| Mental retardation | 2 | 5 | 5 | 12 | 2 | 5 | 1 | 8 |
| Convulsive disorder | 1 | 1 | 0 | 2 | 5 | 7 | 2 | 14 |
| Sexual deviation | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 2 |
| Others | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 |
| Total | 100 | 63 | 113 | 276 | 197 | 190 | 106 | 493 |

| | Discharges to Community | | | | Discharges to Inservice | | | |
|----------------------------------|-------------------------|--------|--------|-------|-------------------------|--------|--------|-------|
| | 1964-66 | '66-68 | '68-70 | Total | 1964-66 | '66-68 | '68-70 | Total |
| Schizophrenia or psychosis | 82 | 103 | 74 | 259 | 61 | 74 | 57 | 192 |
| Neurosis | 31 | 21 | 36 | 88 | 10 | 20 | 12 | 42 |
| Personality disorder | 23 | 11 | 10 | 44 | 6 | 4 | 1 | 11 |
| Adjustment reaction | 5 | 7 | 14 | 26 | 4 | 2 | 6 | 12 |
| Mental retardation | 1 | 7 | 6 | 14 | 3 | 1 | 3 | 7 |
| Convulsive disorder | 1 | 2 | 2 | 5 | 6 | 4 | 1 | 11 |
| Sexual deviation | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 |
| Others | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 |
| Total | 143 | 153 | 145 | 441 | 92 | 105 | 80 | 277 |

| | |
|-------------------------------|-----|
| Total admissions | 769 |
| Total discharges | 718 |
| Discharges to community | 441 |

TABLE II

Patients Admitted to and Discharged from Chapin Day Hospital from Nov. 19, 1969, to Aug. 19, 1970

| Diagnosis | Admissions | | | Discharges to Community | Transfers to Inservice |
|--|----------------|----------------|-------|-------------------------|------------------------|
| | From Community | From Inservice | Total | | |
| Mental retardation | 4 | 1 | 5 | 1 | 0 |
| Organic brain syndrome | 1 | 0 | 1 | 1 | 0 |
| Psychosis | 21 | 14 | 35 | 21 | 8 |
| Neurosis | 31 | 10 | 41 | 22 | 2 |
| Personality disorder | 4 | 1 | 5 | 5 | 1 |
| Adjustment reaction of adolescence | 4 | 0 | 4 | 2 | 0 |
| Total | 65 | 26 | 91 | 52 | 11 |

adjusting both to the structure of the day program and to other patients and the staff. The family too undergoes a painful and stressful experience, whether the patient is newly away from home or is returning home at night either after being an inpatient or during a predischARGE period of therapy. Because the social worker can maintain an objective view of the social and economic stresses within and without the family, he can offer encouragement and guidance.

The social worker observes and maintains an active interest in the patient's progress in overall performance of various therapeutic activities. He directs or redirects the patient's attention and energies into channels leading to the goal of socially

acceptable adaptation. In this he reinforces the directives of the psychiatrist and shares with him the observations of the patient's day-to-day progress. Finally, he presents to the treating team plans for the patient's return to the community as a productive citizen.

The patient's behavior at the hospital usually parallels that within the home and community. When he shows signs of improvement at the day hospital but not at home, it becomes apparent where the problems exist. The social worker then counsels the family as well. As their relationship develops, elements in the patient's environment which have contributed to his illness may become

(Continued On Next Page)

TABLE III.
Chapin Day Hospital Schedule for Patients

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|-------------------------------|--|---|--|-----------------|
| 8:00-9:00 | Coffee hour | Coffee hour | Coffee hour | Coffee hour | Recreation day |
| | Medication | Medication | Medication | Medication | |
| 9:30 to 11:30 | Art therapy or work activity | Conference for staff Work activity for patients | Hairdressing for female patients Work activity for male patients | Cooking and art therapy or work activity | Recreation day |
| 11:30 to 1:00 | Medication, lunch, relaxation | Medication, lunch, relaxation | Medication, lunch, relaxation | Medication, lunch, relaxation | Recreation day |
| 1:00 to 2:00 | Dancing | Group meeting | Movies | Group meeting | Arts and crafts |
| 2:00 to 3:00 | Work activity | Work activity | Book discussions Work activity | Work activity | Work activity |

evident. The social worker may then refer the family or one of its members to specific community agencies for particular needs.

DAY HOSPITAL PROGRAMS

Patients participate in various programs. A week's schedule of activities at the Chapin Day Hospital and attendance at both day centers are shown in Tables III and IV respectively.

Group Therapy: Two sessions a week are held with the psychiatrist and staff leaders simulating the family setting. In the group, patients react with less fear and help one another alter socially unacceptable behavior; they also have an opportunity for reality testing among themselves. Afterward in smaller groups of four or five they usually restate and interpret what has been discussed.

The staff often holds a "post mortem" of a session to analyze the composition of the group, the roles played by each therapist, his attitude toward transference, and the interaction of the individual within the group. Further, at the weekly staff conference with the consultant to the program in attendance, development of the therapeutic process within each group is often reviewed.

Group Discussions: Films borrowed from the library are shown to help patients build and understand human relationships and reestablish meaningful communication with others. The topics of these films vary from controversial social issues to specific subjects such as the neglected child, the Game, and the Jungle.

Home-living Program: Each group participates in this program once a week. This is another milieu where a "success situation" can be found. In a family-like atmosphere, patients are helped by a group worker and a home economics teacher to relate to one another while learning basic home-making skills and preparing simple meals.

TABLE IV
Patients Treated at Chapin and I.M.H. Day Care Hospitals

| Patients | Chapin | I.M.H. |
|--------------------------------|--------|--------|
| Daily census | 17 | 47.3 |
| Daily average attendance | 11 | 28.6 |
| "Guests" | | |
| Daily census | 23 | 12.9 |
| Daily average attendance | 13 | 9.7 |
| Patients and guests | | |
| Daily census | 40 | 60.2 |
| Daily average attendance | 24 | 38.3 |
| Outpatients | | |
| Daily census | 25.2 | 50 |
| Daily average attendance | 3.5 | 2.3 |
| Total treated | 91 | 769 |

Recreation: One day a week all of the patients and staff talk about the general policy of the day care center and its various activities in a general group meeting. Then all go off the premises by bus to participate in various recreational activities such as bowling during the winter months and outings and cookouts in the summer.

The Hobby Club meets every week. Patients interested in arts and crafts can be creative and imaginative here. They make home-related items such as decorations, toys, home furnishings, and floral arrangements. Volunteers help patients participate in arts and crafts, dancing, and music therapy. The women are invited to the beauty salon, which is managed by volunteers, as are the regular book discussions and poetry readings conducted by the state library service.

Work Activity Program: Many patients are incapable of thinking their problems through and expressing themselves verbally. Working with their hands helps them reduce their self-consciousness, introduces a meaning to their lives, and helps to break their isolation from other patients who are participating in the same activity.

Therefore a license was obtained from the United States Department of Labor authorizing the day care centers to be sheltered workshops paying special minimal rates based on the Fair Labor Standards Act or the Walsh-Healey Public Contracts Act. These jobs have such common factors as the discipline of time-keeping, reaching required standards of workmanship, accepting instructions, and requiring persistence and application to meet production targets.

Patients work 10 to 16 hours per week in two-hour periods at a diversified, simple, repetitive type of work which is subcontracted from companies in the surrounding communities. The positive reinforcement or the reward-credit approach is used; they are paid at piece rates based on wages to nonhandicapped workers engaged in the same work in regular commercial employment.

Besides receiving money for his work, the patient gets a sense of satisfaction by achieving something he can see; he gains self-confidence and develops the feeling of self-worth. He proves to himself that he is as good as, or better than, other people — and he can keep score by the money he earns.

Since Rhode Island has a highly industrialized economy, obtaining work for the patients has not been difficult. Moreover, directors of the work activity centers maintain high ethical standards in inter-center relations. They communicate and cooperate with one another so that there is no competition for contracts. When one center has more work than can be performed, it subcontracts to another center. The United Fund's Community Workshop in Cranston and Trudeau Center for the Retarded are particularly helpful in this respect.

The work program has grown. In the 12 months ending June 1970, patients earned twice as much as in the preceding 12 months. Since then, however, the rise of unemployment in industry has made it difficult to obtain work contracts. Arts and crafts have been substituted in therapy whenever work was not available.

DISCHARGING THE PATIENT

The Day Hospital also serves as a transitional facility for inpatients of the Crisis Intervention and Intensive Treatment Services. They attend the day programs as "guests," and they participate in all the activities. Their treatment teams visit them regularly and in this setting gain additional insight into their ability to adjust in a new situation, in a group, in social activities, and in an earning capacity. Such insight aids consider-

ably in planning the patient's discharge.

After being discharged, some former inpatients continue to attend day care programs also as "guests" to obtain further help in dealing with their problems and the stressful experiences they encounter. More attention then is given to the burden placed upon the family and relatives of these patients so there may be a more rapid recovery.

Discharge from the day care program itself is usually a gradual process. First, the number of days of attendance is reduced. When the patient is able to adjust, plans are formulated with him for discharge and follow-up care. He has the privilege of returning once a week for adjustment of medication by the psychiatrist and for counseling by the social worker. Such visits may be continued as frequently and for as long a period as needed.

CONCLUSION

The author believes that day hospital care shortens the term of treatment for the mental patient. Moreover, once discharged, he is less likely than the inservice patient to be readmitted for further treatment. The author believes therefore that day care of mental patients in Rhode Island is practical, economical, and efficient.

ACKNOWLEDGEMENTS

The author wishes to thank Mario A. Nicotra, M. D., Chief of Psychiatric Services, and the members of the staff who have worked in the Day Care Program, especially Kurt E. Rose, M. D., Consultant Psychiatrist, Mrs. Fish, Chief of Social Service-Receiving and Screening Unit, Mrs. Ryan, Nursing Supervisor at Rhode Island Medical Center, Mrs. Waters, Nursing Supervisor at Charles V. Chapin Hospital Day Care Program, and Mr. Cardoza, Social Worker, for their devotion, dedication and invaluable work.

REFERENCES

- ¹Johnson JA, Jr: The basis and techniques of group therapy. *Dis Nerv Syst* 25:335-43, Jun 64
- ²Becker A; Murphy NM; Greenblatt M: Recent advances in community psychiatry. *N Engl J Med* 272:621-6, 25 Mar 65
- ³Jepson WW: Social and community psychiatry and its effect on the family. *Med Coll Virginia Q* 5:120, 69
- ⁴Long LH, editor: *World Almanac and Book of Facts*. New York, Newspaper Enterprise Association, Inc., 1971. P. 405
- ⁵*Encyclopaedia Britannica* 19:266, 1970
- ⁶Rusch KH: A review of Wisconsin's day care program for the mentally handicapped. *Am J Public Health* 57:2143-8, Dec 67

R. I. Medical Center
Howard, R. I. 02834



Rhode Island's First Woman Physician

***Martha Mowry, M. D. (1818-1899),
Recently Rediscovered, Practiced In
Providence For Over Forty Years.
Second Female Physician Believed To
Have Been Julia A. Beverly, M. D.
(1814-1876)***

By Seebert J. Goldowsky, M.D.

Doctor Anita Elizabeth Tyng was the first female member of the Rhode Island Medical Society. Doctor Tyng, who graduated from the Woman's Medical College of Pennsylvania in 1864 and was elected to the Rhode Island Medical Society in 1872, died in 1913 at the age of 75.

It had been the conventional wisdom about the Rhode Island Medical Library that Doctor Tyng was also the first female doctor in Rhode Island. Our late colleagues who lived around the turn of the century would have known better. It appears that Doctor Tyng was, in fact, not the first female doctor in Rhode Island, but the third.

While searching the microfilm files of THE PROVIDENCE DAILY JOURNAL for the year 1855 concerning some matter which now escapes the writer, he found the following advertisement in the issue of October 9:

**MARTHA H. MOWRY, M.D.
OFFICE 22½ SOUTH MAIN ST.**

Miss Mowry's duties as Professor at the Fe-

SEEBERT J. GOLDOWSKY, M.D., of Providence, Rhode Island; Editor-in-Chief of the Rhode Island Medical Journal; Consultant in Surgery, The Miriam and Rhode Island Hospitals.

male Medical College of Philadelphia, (located 229 Arch St., Philadelphia,) having closed for the season, has resumed her practice in Providence, and can be found at her office, 22½ South Main St. Office hours from 8 to 10 a.m., from 12 to 3, and from 6 to 7 p.m.

Visits made to patients in the city or country."

The notice appeared several times during those autumn weeks. It stimulated the inquiries on which this sketch is based.

BIRTH AND CHILDHOOD

Martha Harris Mowry was born in Smithfield, Rhode Island on June 7, 1818, the second child of Thomas and Martha Harris Mowry. Their first child, Immer Earl Mowry, was born in 1812. Her paternal grandfather, "Clark" Daniel Mowry, had been Smithfield town clerk and clerk of the Probate Court, and was prominent in local affairs. Father Thomas Mowry was described as "a strong and vigorous man, both mentally and physically. He was one of those men, of whom we have too few, that do their own thinking. He received his opinions from the *ipse dixit* of no man. He read for himself and thought for himself. It would not be strange, therefore, if he did not agree in all things with those with whom he was surrounded."

A few months after Martha was born, her mother died. Martha was raised by her paternal Aunt, Amey Mowry, who never married. When Martha



Martha Harris Mowry, M.D.

was three, her father married Polly Buffum. No children were born to this marriage.

Martha attended the schools of Miss Sterry and Miss Chace in Providence, and in 1825 at the age of seven was sent to Walker's Academy, and later to the Friends' Yearly Meeting Boarding School

in Providence. She remained there until 1832, when she went to Miss Latham's select boarding school, and later to Miss Winsor's young ladies' boarding school.

While at the latter she was taken ill with "heart

(Continued On Next Page)

weakness" (rheumatic fever?) from which she continued to be affected to some extent for four years.

Upon regaining her health, she was sent to study in the Green Street Select School in Boston where Margaret Fuller, the great 19th century feminist and later the Marquesa Ossoli, was teaching. After leaving school Martha continued to study languages and Oriental literature, developing a gift for languages which was undoubtedly inspired by her eminent teacher.

MEDICAL STUDIES

Sometime during 1844 she resolved to undertake the study of Medicine, a then almost unheard of vocation for a woman. At that time no woman had yet been admitted to a medical college. She studied with a number of prominent local physicians, including Doctor Esekial Fowler of Woonsocket, the noted Doctor Joseph Maurant, and Doctor Charles W. Fabyan, both of Providence. A Doctor de Bonneville is also mentioned, possibly a peripatetic teacher, who in 1847 resided at the Mansion House in Providence.

In the winter of 1849-50 she was asked to take charge of a medical college for women in Boston. To fit herself for this work, which apparently never materialized, she continued her studies under Doctors Paige, Gregory, Cornell, and others, none of whom were members of the Rhode Island Medical Society or are otherwise readily identifiable. Doctor Paige was said to have established a school in Providence in which Martha took a course in electropathy, for which she received a diploma. She was esteemed as a lecturer, and the Providence Physiological Society presented her with a silver cup in recognition of her services as a lecturer, and as a token of their respect and confidence.

WOMAN'S MEDICAL COLLEGE

According to her newspaper obituary Martha "received a diploma as 'M.D.' from a Philadelphia Allopathic Medical School in 1853, after being examined for the degree by a committee of physicians and in the same year was appointed to a professorship in the Female Medical College of Pennsylvania, which was then only three or four years old." Founded in 1850, the school became co-educational in 1870 and changed its name from The Woman's Medical College of Pennsylvania to the Medical College of Philadelphia.

The minutes of the corporation of Woman's Medical College for May 10, 1853 noted that "A

communication was received from the Dean of the Faculty recommending that the Honorary Degree of M.D. be conferred on Martha H. Mowery (sic) of Rhode Island and that she be selected Professor of Obstetrics and Diseases of Women and Children in this College."

An entry for May 12 reported that the honorary degree had been conferred on that same day and that the recipient was elected to the faculty. A letter from Martha accepting the appointment to a chair in the college was read into the record on June 10. During the ensuing year Martha was listed as present at all faculty meetings. Her tenure, however, was brief. In a letter dated April 26, 1854, she resigned from the faculty. This letter was taken note of in the Corporation minutes of September 6, 1854. Her name appeared in the 1853 college catalogue for the academic year 1853-1854.

RETURN TO PROVIDENCE

She returned to Providence where she resumed the "regular" (i.e. allopathic) practice of medicine. Martha's resignation from the Woman's Medical College faculty was written in April 1854 and accepted in September of 1854. There is no ready explanation for the statement in her advertisement of October 1855 implying that since the Female Medical College had "closed for the season" she had "resumed practice in Providence." This was no temporary state of affairs. Her successor at the college had already in fact been selected on September 18, 1854 and served for the whole session of 1854-55.

Polly Mowry died on February 20, 1842, leaving Thomas widowed once again. About this time he joined his married son Immer Earl in Providence, where the latter conducted a grocery business at 20 South Main Street. Their home was at No. 22. Martha, listed for the first time in 1850, lived at the same address, identified as "M. H. Mowry, Miss, physician". Her name also appeared in the listing of physicians in the same directory, although she was not mentioned as a member of the Rhode Island Medical Society. This accords with Society records. By 1854 Immer Earl had moved to a new address and became bookkeeper at the Eagle Screw Company. The grocery business did not appear after 1844.

Henceforth the household at 22 South Main Street consisted of Thomas, now aged 65, and daughter Martha. She had lived and practiced in Providence some three years before her sojourn in Philadelphia; it is not surprising that her father

desired her to be with him again during his advancing years. He lived until 1872, when in his 87th year he passed on. He was described in his obituary as "a well-known Providence merchant in the early part of the century."

MOVE FROM SOUTH MAIN STREET

In 1867 Martha and her father moved to 30 South Main Street, where she lived and maintained her office until 1870. Her father's name appeared only sporadically, but it was listed with hers in 1872, the last year of her life. From 1870 she lived at various addresses on North Main Street (446, 605, and 601). In 1880-82 she lived at 25 College Street, then on Chestnut Street, and from 1886 until her death at 148 Friendship Street. In 1873 she conducted a hydropathic institute in connection with her home and office.

Little is known now of her practice. Her newspaper obituary stated that she was "believed to have been the first woman to regularly practice medicine in the city." She was reputed to have had an "extensive and lucrative practice", which she carried on actively for more than 40 years.

FEMINIST ACTIVITIES

Martha Mowry was one of the earliest members of the Association for the Advancement of Women, and for a number of years was its Vice President. After the death of her Aunt Amey in 1863 she was regularly chosen President of a religio-benevolent society in Smithfield, founded by her aunt in 1856. She was a member of the Rhode Island Woman's Club from its founding, the Women's Educational and Industrial Union (of which she was also treasurer), the Providence Franklin Society, the Rhode Island Horticultural Society, and the Veteran Citizens' Historical Society.

She had always been interested in educational matters, and since her early training under Margaret Fuller was an accomplished scholar in classical, Hebrew, and Oriental literature. A pioneer in the women's suffrage movement, she attended the Woman Suffrage Convention held in Worcester, Massachusetts in 1850.

CAREER ATTAINMENTS

Martha never married. In her obituary she was described as "a woman of unusual attainments . . . without doubt . . . largely instrumental in leading the way in the field of professional and scientific work for the women of this country."

Martha suffered a severe shock in 1897 and was not "expected to live a great length of time." She succumbed suddenly to a second bout of apoplexy in her home on Friendship Street on August 29, 1899 in her 82nd year. Her funeral was held on August 31 from the Chapel of the First Congregational Church on Benevolent Street in Providence.

NOTE ON JULIA A. BEVERLY

During perusal of Providence directories to locate Martha Mowry's various abodes, the existence of another female physician contemporary to Martha became apparent. Julia A. Beverly was listed as a "physician" at 61 Mathewson Street in the directory of 1853. On several occasions a "Mrs." was associated with her listing. She moved about quite a bit, practicing variously at 68 Clifford, 36 Stewart, 279 Westminster, 367 High, and finally at 27 Winter Street, all on the west side of the Providence River.

THE PROVIDENCE DAILY JOURNAL of November 15, 1876 carried the following news item: "Sudden Death — Mrs. Julia A. Beverly, a well known doctress, living at No. 27 Winter Street, returning from a professional call, fell in a fit of apoplexy in the entry of her house". This had occurred on the 13th. "Medical aid was summoned", the report continued, "but all attempts to restore her consciousness were in vain". She died on the 14th of November in her 63rd year. The obituary notice identified her as "Julia A. Beverly, M.D." She was buried from the New Jerusalem Church at Broad and Linden Streets.

Nothing more is known of Julia. The authenticity of her M.D. degree has not been verified, and the quality of her education or training has not been ascertained. She was not a member of the Rhode Island Medical Society.

REFERENCES

- ¹Providence Journal microfilm files
- ²Providence City Directories
- ³Woman's Med Coll Pennsylvania: **Corporation minutes**
- ⁴Mowry WA: **The descendants of Nathaniel Mowry of Rhode Island**. Providence, Sidney S. Rider, 1878. Supplement 1900
- ⁵**Births and deaths**, Smithfield Book 1, p. 451. Clerk's Office, Central Falls, R. I

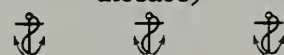


DERMAQUIZ ANSWER

(See Page 555)

Left, papillomatosis and keratoses.

Right, neurofibromatosis (von Recklinghausen's disease)



The Medical Humanists - Linacre And Caius

*Author Takes Note Of 450 Years Of
Peer Review, Quality Control, And
The Royal Colleges.*

By Robert V. Lewis, M.D.

The "medical profession" as we understand it may be said to have begun in the English-speaking countries a little over 450 years ago when on the 23rd of September, 1518, Thomas Linacre obtained a Royal Charter from King Henry VIII for the establishment of the Royal College of Physicians in London. This was the first association of doctors of medicine for the control of their profession and its welfare. It was the first organization to establish a mechanism of self-regulation, self-discipline, and peer review. Soon thereafter, a charter was granted by Henry VIII for the Barber Surgeons; this has been recorded for history in the magnificent painting of the event by Hans Holbein.

In taking note of the 450 year history of the Royal College of Physicians we must turn to the Medical Humanists, Thomas Linacre and John Caius, and the whole Medical Humanist tradition, on which the two colleges, of physicians and surgeons were founded, to understand our origin. It is timely further to take cognizance of the coming 500th anniversary of the birth of Erasmus, the

contemporary and colleague of Thomas Linacre. This entire period of history and its dominant personalities have become currently popular because of Bolt's play, "A Man For All Seasons", whose main character, Sir Thomas More, belonged to that intimate circle of 16th Century Medical Humanists.

The Medical Humanists followed the Renaissance, which had begun in Italy at the close of the 14th century when a group of scholars, among them Rabelais, began the re-study of Greek, and resorted to original Greek texts of Classical literature, philosophy, and medicine. Throughout the Western World in Medieval Medicine Galen had been the authority; but this Galen had been translated, transliterated, detracted from, and added to by so many translators that little of the original Galen remained. Actually, most of the translations of Galen were from the Arabic; the Moslems had dominated medicine and medical thought well on to the end of the 15th century.

At Oxford and Cambridge the study of Greek was re-introduced by Thomas Linacre and John Caius. The only facility for the study of Greek in 1500 was at the monastery of Canterbury. Actually Linacre first began his study under the first teacher of Greek in England, William Selling. In 1488 Henry VIII sent Selling to Rome, and Lin-

ROBERT V. LEWIS, M.D., of Providence, Rhode Island; President-Elect, Rhode Island Medical Society; Physician, Department of Medicine, Rhode Island Hospital.

acre accompanied him. During the ensuing two to three years while traveling throughout Italy, Linacre studied both Greek and Medicine and, before returning, received his medical degree from Padua. In Italy he was joined by other young English Classical scholars, William Grocyn, William Lily, and John Colet, who later became Dean of St. Paul's. Erasmus was an intimate friend of all of them, especially Sir Thomas More, to whom Erasmus dedicated his "In Praise of Folly", which very name indeed, "Encomium Moriae", "Praise of Folly", is a pun on the words 'More' and 'Moriae'. Through Linacre, More, and other enlightened Humanists the king was petitioned to establish a true medical faculty at Cambridge and Oxford where the re-discovered original Greek medicine could be taught in its pure and unadulterated form. Linacre was a devoted Galenist, and his greatest work is the translation of Galen from the original Greek.

Thomas Linacre was personal physician to Henry VIII, and in this relationship he had the opportunity to influence the king for good. The celebrated Regius Professorship of Medicine at Oxford was established obviously by the king — "Regius". The beginnings of true clinical education at Cambridge can be attributed to Linacre. He established standards, and eventually established a mechanism for organizing the medical profession in the form of the Royal College of Physicians, which has been the prototype of organized medicine for close to 500 years.

John Caius was the true spiritual descendant of Linacre. The Royal College, founded in 1518, saw John Caius as president 35 years later in 1555. Caius was a strict Galenist who likewise had received his education in Italy, at Padua. For several months he was the roommate of Andreas Vesalius. At the end of eight months Caius could no longer stand the demonstrations of anatomical errors in Galen which Vesalius clearly showed, and which eventually were shown not to be due to errors in the manuscripts, as Caius had ardently hoped. Great as Caius was it must be admitted that he was the last of the arch-Galenists. To his discredit as President of the Royal College of Physicians, he had one John Geynes suspended from the College for a year because he insisted that Galen had committed errors. It was, however, under Caius' firm presidency and willingness to discipline and maintain standards that the college was firmly established.

At the time it was easier to obtain a degree of

Doctor of Medicine from Oxford than it was to pass the examination of the College of Physicians. Since it was the law of the land that a graduate in Medicine of Oxford or Cambridge was exempt from the regulations, many sought to avoid College licensing by "buying" a diploma at Oxford or Cambridge. When two unqualified men were called before the Royal College to be fined, they skipped town and enrolled at Oxford. They received their Bachelor degrees in Medicine and went on to obtain their M.D. degrees. Caius lost no time in intervening with the royal visitation to Oxford. He spoke out vigorously against bribery, corruption, and the laxity of awarding medical degrees at the new universities, and brought reform. Both men were later admitted to the Royal College, but, with true justice, not until they had paid their original fine for illegal practice.

John Caius, during his presidency of the Royal College of Physicians in 1555, began the *Annals*, publication of which has been uninterrupted since then. The Caduceus, sign of the President and carried on formal occasions, was also created during this time. The College's influence on the practice of medicine has persisted to this day; examination and acceptance by the Royal College is still an educational prerequisite, if not a legal one, to appointments in the senior positions of house staffs in England.

The Medical Humanism which began in England in 1500 through the impact of the personalities of Erasmus, Linacre, Colet, Caius, and Sir Thomas More, curiously was still alive 150 years later when Boerhaave at Leyden went back to Hippocrates, re-instituted the Hippocratic method, especially bedside teaching, and established the University Teaching Hospital in Leyden 300 years ago.

Thus the conjunction of the 450th year of the Royal College of Physicians, the 500th anniversary of the birth of Linacre and Erasmus, and the 300th of Boerhaave's birth was an event of consequence. Our debt to their dedication to scholarship, education, virtue, concern for the welfare of the profession, and the protection of the health and welfare of their fellow man is acknowledged.

REFERENCES

- ¹O'Malley CD: **English medical humanists**. Lawrence, Kans., University of Kansas Press, 1965
- ²Osler W: **Thomas Linacre**. Cambridge, University Press, 1908
- ³Rosenheim M: 450 years old—what of the future? **Am Intern Med** 68:1115-1120, May 68

Editorials

THE FUTURE OF ORGANIZED MEDICINE

There is concern in the AMA over the need for continual infusion of young members into the organization. It is fashionable in certain circles to denigrate and criticize the AMA on ideological grounds, citing examples of past conservatism, some of which have not applied for a generation. At any rate, the vast AMA complex with its many committees and councils is doing massive service in the cause of good medical practice and improved medical care. Only those knowledgeable about the inner workings of the AMA and its House of Delegates can be cognizant of the full scope of this important work.

Those who stay out of organized medicine have no alternative organization to represent them. The way to a better AMA is for all to join and work at making it better.

Medical students as such are not eligible for membership in the AMA or its constituent societies. The Student American Medical Association (SAMA) is an active and yeasty organization which has good relations with the AMA. It sends non-voting delegates to the AMA House of Delegates and participates in all reference committee deliberations. The desirability of giving them full voting privileges is now under study.

At its recent Atlantic City meeting the AMA House of Delegates adopted bylaw changes which will permit physicians in training and others who are ineligible for membership in a county or state medical society to become members of the AMA and to have representation in the House of Delegates.

The Rhode Island Medical Society at a recent meeting of its House of Delegates adopted

bylaw changes which will permit "intern and resident physicians, issued a non-limited license to practice medicine by the State of Rhode Island, and serving in training programs approved by this Society and for whom there are no provisions for active membership in a county or district society" to be eligible for active membership in the State Society. This is an important step forward. Currently interns and residents are eligible for associate membership in the Providence Medical Association.

The dues expected of these young doctors should be modest so as not to discourage their joining. Further, a membership committee should be set up to proselyte actively among them. They should be indoctrinated concerning the activities of the AMA and be made to feel that they are wanted. Yearly social gatherings and indoctrination sessions should be given serious consideration.

While we are on the subject of membership, it should be recognized that there are district or county society members who are not members of the Rhode Island Medical Society and in turn members of the latter who are not members of the AMA. It is our editorial view that such members are having a free ride. Currently a poll is under way in California to explore the wisdom of unitary membership¹. We believe that serious attention should be given to this problem both locally and nationally.

¹Since we have gone to press, it has been announced that unified membership in the county, state, and American Medical Association, was favored by 61 per cent of the members of the California Medical Association. See AMA Newsletter of November 1, 1971.

PHARMACEUTICAL ADVERTISING*

Tropical beaches, racing cars, and naked women.

All appeared last year in journal advertising for pharmaceuticals, from antibiotics to diuretics to antihistamines, titillating doctors with a sensory siege designed to tweak every neuron from crotch to frontal lobe. And the verbal pitch accompanying the visual seduction was all too often that familiar blend of bland truth seasoned with a pinch of

fantasy which most of us have learned to expect from drug advertising.

In an area where unembellished facts are so critical to health and life, the first temptation might be to lash out at the perpetrators of these misleading ads — the pharmaceutical companies and their promotional agencies. This would be as naive as it would be futile. For the prime purpose of these corporations is to make money, not to guard the public welfare, however much industry executives and institutional ads may tout a company's social responsibility. One would like to hear

*Reprinted from the March, 1971 issue of **The New Physician** with the permission of the publisher and author.



FOR SALE EVERYWHERE.

"Dr. Flint's Quaker Bitters." Philadelphia Museum of Art: Smith Kline and French Foundation Fund.
This illustration appeared coincidentally with the editorial as originally published.

an end to the frequent attacks which portray industry leaders as greedy, evil, unethical men. They are merely businessmen trying to run their operations on sound business principles. For those of us who would like to see reform in pharmaceutical promotion, the real task is not to browbeat the businessmen for doing what comes naturally, but to exclude by law "sound business principles" from areas of pharmaceutical promotion where they should never be allowed to intrude.

Concern about the pernicious effects of advertising on *The New Physician* audience has prompted demands that *TNP* create its own advertising standards and review board, or that *TNP* eliminate pharmaceutical ads altogether. The latter suggestion, while it has a certain romantic appeal in some quarters, would leave the journal morally rich and financially defunct. Fifty-four per cent of the journal's advertising revenues come from pharmaceutical companies. While the journal eventually may have to look elsewhere for this money, at the present time the journal's role

in communications for health care reform is important enough that the editors could not justify an Inquisitional auto-da-fé. For if it left us looking as pure as Joan of Arc, it would also leave us in ashes. The symbolic value of such a martyrdom and its piddling effect on the whole of pharmaceutical advertising would hardly outweigh the practical value of the journal's loud and thoughtful voice in the political struggle ahead.

The other notion — that we set up our own advertising standards and review board — might clean up ads in *TNP*, but the mass of journal advertising would go its familiar way. Even assuming that advertising agencies would comply with the dictates of our review board, we would be achieving a limited and ineffectual victory. Moreover, the guidelines adopted at the 1970 national SAMA convention are either irrelevant to current problems or hopelessly simplistic. The resolution states that:

(1) The generic name of the product be clearly and conspicuously shown.

(2) The indications for the product be stated in a forthright manner not calculated to mislead.

(3) The dangers of real significance be spelled out in the body of the advertisement, not buried in a reproduction of the package insert "contraindications."

(4) The approximate retail cost to the patient be printed on a single page under the SAMA heading.

(5) Advertisements be printed only at the front and back of the journal, not interspersed with the articles, features, and editorials. . . .

Proposal one has been FDA law since the January 1964 additions to the Pure Food and Drug Act, which require that all advertisements show the generic name of the product in letters at least half as large as the trade name. Proposal five has been *TNP* policy for over two years. The provision calling for publication of retail costs is of little value, for the multiplicity of dosage forms and the difficulty of estimating retail cost from known wholesale prices would make such a price list confusing and misleading.

The nitty-gritty of the resolution — proposals two and three — is covered by FDA regulations far more thoroughly and detailed than any guidelines SAMA would have the experience or energy to devise¹. In view of the elaborate government regulations, it would be foolish of *TNP* to enforce its own standards, let alone the simplistic 1970 SAMA resolution.

On the other hand, despite increasing FDA vigor in surveillance of advertising, it is clear that the regulations are not enforced to the hilt. The Intergovernmental Relations Subcommittee of the House Committee on Government Operations recently charged FDA with "lack of a clear, consistent, and coordinated enforcement policy," "excessive timelags before dissemination of remedial information," and "use of 'remedial' ads which do not disclose the misrepresentation they are intended to correct." More aggressive enforcement could remedy many problems. SAMA should support efforts to persuade Congress to provide FDA with sufficient funds to develop a staff adequate to enforce the regulations.

Presently, FDA has only four officers and two clerical workers in its advertising unit. FDA wants to increase the staff to 12 officers. According to testimony by FDA Commissioner Dr. Charles Edwards before the Intergovernmental Relations

1. See Chapter V of the federal Food, Drug and Cosmetic Act, whose June 1969 revision clarifies and strengthens the requirements by describing specific elements constituting deceptive advertising.

Subcommittee, FDA has already sharply increased the monitoring of ads and promotional labeling. In the three-month period from December 1969 through February 1970, FDA reviewed an average of less than 100 ads or promotional pieces each month. By contrast, the agency reviewed 2,234 journal ads in March 1970 and more than 1,000 ads each in April, May, and June 1970. This progress followed the establishment in early 1970 of a Division of Drug Advertising in the Bureau of Drugs.

But while increased staff and tougher enforcement policy might improve the state of drug advertising, post-facto regulation has its limitations. By the time FDA can act, however swift its sword, an advertisement can create a false impression in the minds of thousands of physicians. Moreover, advertising agencies are skilled at creating material for that nebulous DMZ between what is clearly legal and what is clearly illegal, and it is hard for FDA to maneuver in this zone once the ad agencies present a *fait accompli*. Thus, we propose that the statutes be changed to require prior approval of advertisements by the FDA. This would be a long step towards insuring fair and accurate advertising.

Such an arrangement would require a degree of cooperation between government and industry which might seem impossibly visionary. Yet the industry itself professes a formal advertising code which, if rigorously interpreted and applied, could provide a basis for negotiations. The Pharmaceutical Manufacturers Association theoretically requires that

Promotional communications to the medical profession which include a description of indicated uses or dosage recommendations for a prescription drug product should also include a summary (or full disclosure where required by law) of side effects, precautions, warnings, and contraindications, and of effectiveness for the described indicated uses. Such summary should have sufficient prominence in terms of type size, location and similar factors to provide reasonable assurance that it will be observed. . . . Claims should not be stronger than (substantial scientific evidence or other responsible medical opinion) warrants. Every effort should be made to avoid ambiguity.

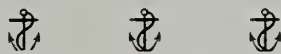
Ultimately, however, any consideration of pharmaceutical advertising is incomplete without acknowledging the fundamental reforms which the industry needs in patent laws and generic labelling, outlined by Dr. Adriani and Mr. Steele elsewhere in this issue. (See *The New Physician* issue of March, 1971.) Such reforms would probably deprive the industry of the economic motivation for its heavy advertising campaigns. Medical journals

some would undoubtedly perish. Hopefully those which are of genuine value would find a way to survive, either through increased subscription prices, government subsidy, or foundation support.

Perhaps then we would all be in a better position to appreciate some harsh facts. The education of physicians should be carried out not by detail men or advertising agencies whose approach is clearly biased, but by impartial experts in post-graduate courses, newsletters, journals, and drug compendia. For even the most saintly detail man

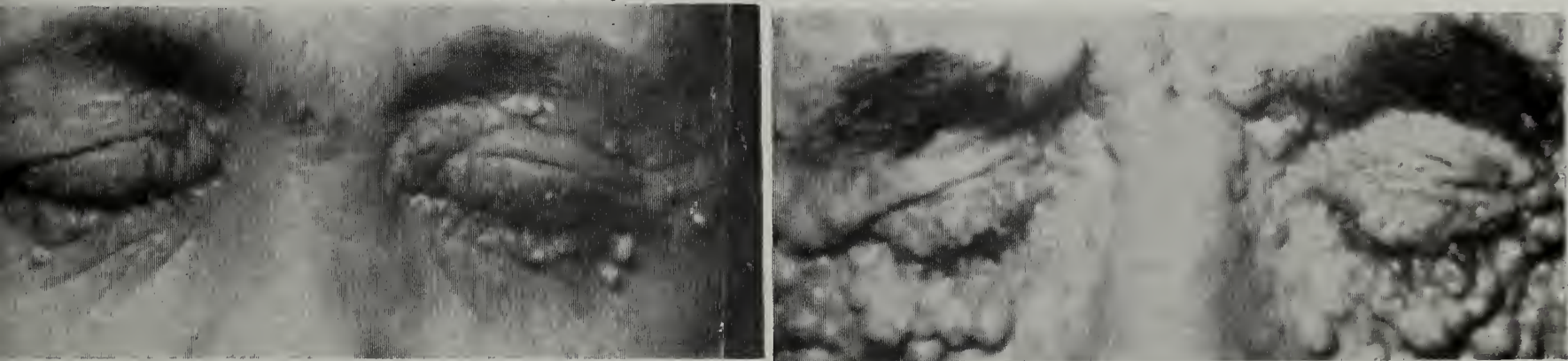
and the purest advertisement have an inherent flaw — they speak for one product — and the physician needs comparative information on many. As impartial information becomes readily available from multiple sources, we can expect the influence of promotional material to wane. And when advertising expenditures no longer produce a commensurate increase in prescriptions, these promotional efforts will dwindle. It will be a hard day for the journals, but a good one for physician's prescribing habits.

— GEORGE FLESH



DERMAQUIZ

Conducted by **FRANCESCO RONCHESE, M.D.**



At left, small tumors and wrinkling, scaly skin of eyelids.
At right, a large number of soft, flabby, small tumors, all over the patient body.
Answer on Page 549



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

HOUSE OF DELEGATES REPORT

(Continued From Page 535)

APPENDIX C

GUIDELINES FOR AUTOMATED MULTIPHASIC HEALTH TESTING PROGRAMS

The Judicial Council has been asked to comment on the ethical aspects of the operation and use of automated multiphasic health testing programs and the use of the results of such testings. There has been a proliferation of these programs. Some are being offered as having direct, immediate, and practical medical value apart from review and study by an individual's own physician.

DEFINITION

A. *Public Health*

Forms of automated multiphasic health testing have been used by public health agencies and centers for development of research in epidemiology. In these programs, for example, asymptomatic patients have been tested for some occult or predisposing early signs of disease; testings have been done to establish medical priorities or case findings in a particular community; testings have been done to separate those who probably have certain characteristics from those who do not; or testings have been done to determine the prevalence of a particular characteristic or group of characteristics in a particular segment of the population.

These programs are medical and scientific. They are well developed. They are under medical direction and supervision. They are to be commended and supported by all.

B. *Industrial Programs*

For many years physicians engaged in occupational health or industrial medical programs have used testing programs for the betterment of employees' health and working conditions. These programs whether a pre-employment examination or a study to control health hazards are not necessarily related essentially to medical care as such. The physician in charge of or associated with such programs may or may not be at the same time the attending physician of the employee. They are primarily directed toward prevention of occupational disease by selective job-placement and general preventive health maintenance for the employee.

C. *Individual-Oriented Programs*

With the advent of automation, new automated multiphasic health testing programs are developing rapidly. These programs obtain health related data, routinely and simply, by using technical personnel and mechanical or electronic devices

to determine facts, e.g. hemoglobin, hematocrit, potassium, sedimentation rate, blood pressure, PKU, VDRL, cholesterol, etc. In several hours a variety of tests and measurements can be made which may provide a profile of an individual's physical status as of the time the tests were made. Such a profile, constructed from this battery of tests, can provide facts about the individual's history, physical measurements, blood chemistry, hematology, urine, and may also include data about sight, hearing, circulation and respiratory functions.

In this, as in other testing, the testing consists only of collecting, recording and reporting factual observations. *Testings are not diagnosis or interpretations.*

D. *Commercial Automated Multiphasic Health Testing Programs*

Some individual-oriented automated multiphasic health testing programs are operated commercially on a for-profit basis. Some, taking advantage of state statutes, are neither physician-owned nor supervised. Undoubtedly many do determine and report facts accurately. Some, however, give the appearance at least of encouraging individuals to be tested without a medical referral for the tests. Some appear to be operated without any communication with the attending physician. Some perform a battery of tests no one of which was requested by the attending physician. No ethical physician would wish to be associated with such a plan because it fails to consider sound medical advice in providing for health care at costs commensurate with the services rendered.

The physician's ethical responsibility is to provide his patient with high quality services. He should not utilize the services of any testing program, whether operated by a physician or non-physician, unless he has the utmost confidence in the quality of its services. He must always assume professional responsibility for the best interests of his patient. The physician who disregards quality as the primary criterion, or who chooses a facility because it provides him with low cost services on which he charges the patient a profit or from which facility he accepts a rebate, is guilty of unethical conduct. Whenever reliable, quality service is available at a lower cost, the patient should have the benefit of those savings. As a professional man, the physician is entitled to fair compensation for his services. He is not engaged in a commercial

(Continued On Page 557)

HOUSE OF DELEGATES REPORT

(Continued From Page 556)

cial enterprise and he should not make a markup, commission, or profit on the services rendered by others.

GUIDELINES

I. For Physician Having Financial Interest in a Multiphasic Facility

Ownership

It is not, in itself, unethical for a physician to own an automated multiphasic health testing facility or interest therein. The use the physician makes of this ownership or interest may, however, be definitely unethical.

Operation

An automated multiphasic health testing facility is a fact finding and reporting system. It must be limited to fact finding and exclude interpretation. Findings disclosed by multiphasic testing facilities should be interpreted only by physicians for patients.

Offering a combination of medical and nonmedical service to the public or the profession is to be avoided. The physician owner of an automated multiphasic health testing facility who is also engaged actively in the practice of medicine should keep these endeavors completely separate. The public must not be confused as to what constitutes reporting of fact and what constitutes the making of a medical diagnosis.

II. For the Practicing Physician

The practicing physician may recommend automated multiphasic health testing where he believes it may be helpful to him in the care of his patient.

Prudence dictates that the physician be selective in recommending or requiring patients to utilize the services of an automated multiphasic health testing facility and not adopt the practice of routinely requiring that all patients or all new patients undergo such testings. When good medical judgment suggests the desirability of such testing the physician should explain in general the nature and purpose of the testing. The patient must be accorded freedom to choose between automated multiphasic health testing facilities if available. Alternatives in the way of single tests should be offered patients where possible and practical.

An attending physician may not receive a rebate, referral fee, commission or the like from a program whose facilities have been used by his patients.

(Continued On Next Page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

R.I.M.S. Membership . . .

5 EXCLUSIVE GROUP INSURANCE ADVANTAGES

Income Protection Plans — four economical plans with weekly benefits beginning as early as the first day of accident or sickness . . . and paying as long as *LIFETIME* from injury and *TO AGE 75* due to illness.

Office Overhead Expense — enables you to keep your office open and retain staff while recuperating from disability . . . without diverting income protection benefits from personal or family needs.

R. A. Derosier Agency

*Group Administrator for R. I. Physicians
Since 1949 "Treating The Whole Patient"
Thru These Affiliates*

FOURDEE AGENCY, INC.

(Ind. Ins. Planning)

FOURDEE PLANNING CORP.

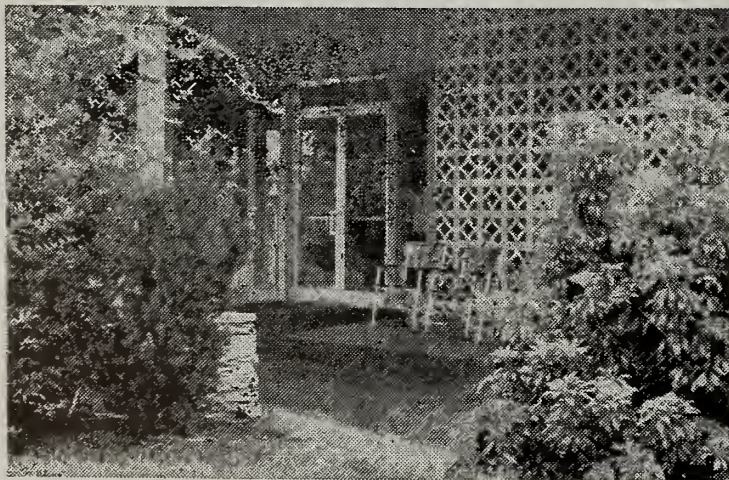
(NASD Broker-Dealer)

215 Waterman Ave., E. Prov. 02914

438-0660

HEALTH HAVENS NURSING HOME

**A Participating Extended Care Facility
In Federal Medicare**



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail

East Providence

Tel. 438-4275

JCAH Accredited

Neither an individual who is tested nor a facility which conducts these tests may demand that a physician accept an individual as a patient or evaluate these tests for the individual. The physician remains free to choose whom he will serve.

III. Physician Directors or Employees of Automated Multiphasic Health Testing Facility

A physician employed by an automated multiphasic health testing facility, in conformity with well established policy of the Association, should not (1) dispose of his professional attainments to any corporation or to a lay body under terms or conditions which permit the sale of the services of that physician by such agency for a fee, not (2) allow his name or the prestige of his professional status as a physician to be used in the promotion of commercial enterprises. He should neither aid nor abet an unlicensed individual or corporation to practice medicine.

IV. For the County Medical Society

The County Medical Society has a most responsible obligation (1) to educate the public regarding the indications for and against automated multiphasic health testing, (2) to educate its members regarding their ethical responsibilities, and (3) to hold itself in readiness to assist persons or corporations that seek the advice of medical societies in setting up automated multiphasic health testing facilities.

Adopted 3-25-71

REPORT OF THE TREASURER

John P. Grady, M.D.

1970 Professional Audit

Ward, Fisher and Company have completed their audit of our 1970 financial records and they have filed their report to me, stating that they had examined the records of the Society and the Medical Journal in accordance with generally accepted auditing standards and accordingly included in such tests of the accounting records and such other procedures as were considered necessary. In their opinion the statement of cash receipts and disbursements present fairly the cash transactions of the Society and the Journal for the year ended December 31, 1970.

Agency Account

The most recent evaluation of the investments of the Society is appended as part of this report. The Council has approved of a recommendation by the Trust Department of the bank that we sell part of our stock holdings in Am. Tel. & Tel. Consumers Power Co., G. E., Public Service Electric
(Continued On Page 559)

HOUSE OF DELEGATES REPORT

(Continued From Page 558)

and Gas, Federal Land Bank bonds, and USA Treasury Notes, and reinvest the money in quality utility bonds that would pick up an annual income of \$500 at the expense of a \$3,400 loss in principal.

Transfer from Savings Account

As in the past we have a balance, from interest, in the savings account of the Blue Cross- Blue Shield group account of the membership, and we have annually transferred most of it to the general operating fund as partial compensation for the tremendous amount of work done by the executive office staff in handling the details of the program. The current balance is \$5,200, and I recommend that \$5,000 of it be transferred to the general account.

Analysis of Membership Payments

Currently the Society has 1,141 members of whom 1,005 are subject to annual dues, and 136 are exempt for the following reasons

| | |
|------------------------------------|----|
| Age | 82 |
| Illness or disability | 15 |
| Military service | 10 |
| Retired from active practice | 19 |
| Postgraduate work | 8 |
| Clergy | 1 |
| Non-resident (Navy) | 1 |

Budget for 1972

As I informed the Council at the July meeting, the budget for 1972 would again reflect a deficit program since our receipts do not provide the funds for the anticipated expenses, and, as we have been doing for the past three years, we will have to utilize our rapidly diminishing cash reserve.

Our last dues increase was in 1966, and since that time we have faced the universal problem of inflation which has steadily increased all phases of our operations of the Society, the Library, and the Medical Journal. In 1968 the Journal was able to pay the Society \$5,000 for services rendered, but since then the situation has been reversed and the Society has made payments of up to \$3,000 annually to offset the loss of national advertising.

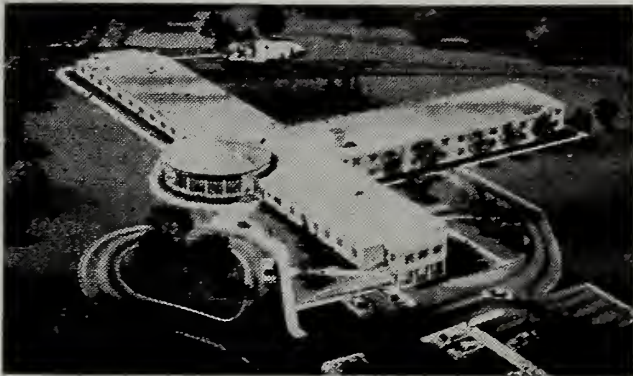
The Society has added an assistant executive secretary to the staff, as well as an exceptionally well-trained assistant librarian, thus the increased cost had to be absorbed from reserve funds. Over the years the annual dues paid by members has met only approximately two thirds of the operating

(Continued On Next Page)

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)



New England's Newest and Most Modern Approved Extended Care Facility

Active Medical Staff — Registered Professional Nurses on All Shifts

SERVICES AVAILABLE: Occupational Therapy, Physiotherapy, Speech Therapy, Inhalation Therapy

For Information — Call 944-8500

Interested in Tax Free or Tax Sheltered Income ??

ASK ABOUT A PROGRAM FOR YOUR PARTICULAR NEEDS.

TAX FREE BONDS
REAL ESTATE
OIL & GAS DRILLING

WHY PAY MORE TAXES
THAN YOU HAVE TO????

WILKES & CO.

P.O. BOX 766
Warwick, R. I. 02888

463-8110

Member National Association
of Securities Dealers Inc.

| | Receipts | Expenses | Bal | Bequests and Grants | Dues | Wages | Taxes |
|------------|-----------|-----------|----------|------------------------|----------|----------|----------|
| 1966 | \$112,814 | \$107,468 | \$10,610 | \$ 4,878 | \$77,410 | \$37,315 | \$10,722 |
| 1967 | 122,242 | 116,629 | 16,223 | 6,394 | 75,740 | 38,058 | 11,049 |
| 1968 | 141,358 | 121,538 | 36,042 | 21,645 | 76,300 | 40,665 | 12,844 |
| 1969 | 122,291 | 130,273 | 28,060 | 8,564 | 77,400 | 49,647 | 15,463 |
| 1970 | 118,910 | 129,701 | 17,269 | 6,249 | 78,045 | 52,686 | 15,162 |

cost of the Society, and if it were not for support from other sources, and in recent years from grants and bequests, we would not have been able to maintain the high standards of service that we have.

The table immediately above illustrates the changing pattern over the past five years.

The high income in 1968 was due to bequests, including approximately \$15,000 from the estate of Carlotta Williams. This was also the last year that the Journal was able to reimburse the Society for staff services. Inflation and increased wages for new personnel are reflected in the operating loss in 1969 and 1970, and continuing into 1971 with the result that we will anticipate a very low cash reserve by the end of this year.

Our budget parallels that of the current year,

and reflects no new appropriations. It calls for expenditures of \$122,874 with an income of only \$111,546, based on \$80 annual dues.

Proposed Bylaw Revisions—1971

ARTICLE III. Membership

(Amendment below in capitals)

Section 2. Members.

The Members are all the active members in good standing in the component societies from whom the required annual dues or special assessments have been received timely by the Treasurer of this Society, unless exemption from payment of dues or assessments has been provided in these bylaws, or by action of the Council. INTERN AND RESIDENT PHYSICIANS, ISSUED A NON-LIMITED LICENSE TO PRACTICE MEDICINE BY THE STATE OF RHODE ISLAND, AND SERVING IN TRAINING PROGRAMS APPROVED BY THIS SOCIETY, AND FOR WHOM THERE ARE NO PROVISIONS FOR ACTIVE MEMBERSHIP IN A COUNTY OR DISTRICT SOCIETY IN THIS STATE, SHALL BE ELIGIBLE FOR ACTIVE MEMBERSHIP IN THIS SOCIETY UPON APPLICATION WITH ENDORSEMENT OF TWO (2) ACTIVE MEMBERS OF THIS SOCIETY ON THE STAFF OF THE HOSPITAL IN WHICH THEY ARE TRAINING, PROVIDED THERE IS NO DISAPPROVAL FOR MEMBERSHIP BY THE COUNCIL OF THIS SOCIETY.

Comment:

This provision is in line with the wording of the AMA bylaw changes to provide for AMA intern and resident membership. Since it may take time for each of the component societies in Rhode Island to change their bylaws to include interns and residents as active members, the above wording would provide a membership by direct application. Otherwise the component society would elect the physician and as an active member he would automatically qualify for state society membership.

ARTICLE IV. Component Societies.

Section 8. DELETE from this section the sentence below *in capitals*.

LUXURY OFFICE SPACE

Own your own suite in a new professional office building to be built in heart of East Side this fall. Combine a lucrative TAX SHELTER, with CAPITAL APPRECIATION potential. MINIMUM CASH INVESTMENT, with attractive FINANCING. Turn-key venture includes all interior decor, air-conditioning and parking.

Serious inquiries invited from individuals or group practices requiring 1,000 sq. ft. or more.

For further information write:

PSI 25

Almeida Avenue, East Providence

Section 8. Secretary's Duties.—The secretary of each component society shall keep a roster of its members, grouping the members according to the type of membership held. With respect to each member, the roster shall contain the full name, address, date of birth, professional college and date of graduation, the date the member was licensed to practice in this state, and such information as the Secretary of this Society may require. THE SECRETARY SHALL ALSO KEEP A LIST OF LICENSED PHYSICIANS PRACTICING WITHIN THE JURISDICTION OF THE SOCIETY WHO ARE NOT MEMBERS.. In keeping such records the secretary shall note any change in the personnel of the profession by death or by removal and shall notify the Secretary in such form as he may require. He shall promptly notify the Secretary of losses of memberships, giving the causes in individual cases.

Comment:

The task of keeping track of physicians is one for the state division of professional regulation which annually publishes a list of all physicians licensed in the State. There is no basic reason why the secretaries of the county and district societies should be required to keep a record of physicians in their respective areas who are nonmembers.

ARTICLE V. Officers.

(Delete words below in capitals.)

Section 2. Tenure of Officers.—The House of Delegates at its regular annual session IN APRIL shall elect . . . etc. . . .

Comment:

With the change of the annual meeting in recent years, April will not be the month for the annual session of the House of Delegates, since the House must elect prior to the annual meeting when new officers are inducted.

(See also amended Section 4 of Article VI below)

Section 9. Secretary.

AMEND item (6) to read (addition in capitals): (6) to keep a register of all licensed practitioners OF MEDICINE of the state, WHO ARE MEMBERS OF THIS SOCIETY, by county; (DELETE): noting the status of each in relation to the appropriate component society;

ARTICLE VI. House of Delegates.

Section 2. Composition. (Add words in capitals)

The House of Delegates shall be composed of
(Continued on Next Page)

RELIEVE



BACK
PROBLEMS

Freeman
SUPPORT for
WOMEN
Model 423

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES
OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION
WALKERS — CRUTCHES — CANES

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist
James P. Casperson — Orthotist

(1) delegates elected by the component societies, each component society being entitled to elect one delegate for each twenty active members in good standing, or major fraction thereof, EXCLUSIVE OF INTERN AND RESIDENT MEMBERS, with the added provision that each component society shall be entitled to elect at least one delegate. . . .”

Section 4. Time of meeting.

(Amend at noted)

The House of Delegates shall meet in January and September, AND ALSO IN ANNUAL SESSION OF EACH YEAR, at such time and place as the President may determine. The House may be called into special session at any time during the year by the President in his discretion or on written petition by FIFTEEN delegates or FIFTY Members.

Comment:

Not listing Spring date for House allows a flexibility in setting a meeting prior to the annual session.

With a House of 63 members, eleven seems too small a number to request a special meeting. Likewise, with 1,150 members in the Society, twenty-five is not a proper number for a special call for a House meeting.

* * *

Section 7. Election of Officers, Delegates to the AMA, and Elected Committeemen.

Amend as noted below.

At its meeting in September on the even year the House shall elect a delegate and alternate to the House of Delegates of the American Medical Association, and annually at its ANNUAL MEETING shall elect officers and elect committeemen.

ARTICLE VII. The Council.

Section 3.

Amend the sentence reading:

“Five members shall constitute a quorum” to read “TEN MEMBERS SHALL CONSTITUTE A QUORUM.”

Comment:

Council consists of 17 members at present. A quorum should at least be a majority.

ARTICLE VIII. Sessions and Meetings.

Section 3. Special Sessions.

Amend the provisions for the number required for the filing of written petition for a special meeting from “twenty-five members” to “FIFTY MEMBERS.”

Comment:

With a membership of 1,150, the 25 number is too low.

ARTICLE X. Standing Committees and Boards of Trustees.

Section 3. Vacancies.

Amend by adding words below in caps:

If an elected or APPOINTED committeeman dies, resigns, is removed or fails to serve, the Council shall appoint a member of the Society to serve ON AN ELECTED COMMITTEE until the next session of the House of Delegates at which time the House shall elect, AND FOR THE MEDIATION COMMITTEE THE PRESIDENT SHALL APPOINT WITH THE APPROVAL OF THE COUNCIL, a member of the Society to serve for the unexpired portion of the term.

Comment:

Presently the bylaw provides only for elected committeemen, whereas the Mediation Committee members are appointees of the President of the Society over a period of years, for 10-year terms each.

* * *

Section 7. Mediation.

Amend by deleting present provisions for the initial formula for establishing the committee whereby the president of the Society, starting in 1960, annually appoints a member for a ten-year term, since the ten-year cycle has now been completed.

The deleted portion would be:

INITIALLY THE COMMITTEE SHALL BE APPOINTED AS FOLLOWS: THE PRESIDENT OF THE SOCIETY SHALL APPOINT ONE MEMBER IN 1960 WHO SHALL SERVE A TERM OF TEN (10) YEARS, AND WITH THE ADVICE AND CONSENT OF THE COUNCIL HE SHALL APPOINT NINE (9) ADDITIONAL MEMBERS WHO, AT THEIR FIRST ORGANIZATIONAL MEETING, SHALL DRAW LOTS TO DETERMINE THE LENGTHS OF THEIR TERMS—ONE, FOR NINE YEARS: ONE FOR EIGHT YEARS: ONE FOR SEVEN YEARS: ONE FOR SIX YEARS: ONE FOR FIVE YEARS: ONE FOR FOUR YEARS: ONE FOR THREE YEARS: ONE FOR TWO YEARS: ONE FOR ONE YEAR.

* * *

Section 9. Industrial Health Committee.

Change the name of the committee to that of

OCCUPATIONAL HEALTH since that title is now used for a similar committee of the American Medical Association, and by many state medical associations.

I. RESOLUTION FROM THE RHODE ISLAND CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

WHEREAS, it is recognized that the nation's most valuable resource is its children, and

WHEREAS, it is recommended that every infant receive quality medical supervision in the earliest period of life, and

WHEREAS, the private insurance industry, including Blue Shield, offers exclusion from coverage for the first fourteen days of life in many policies, and

WHEREAS, certain health problems in children are readily identified and best treated in the first days of life and, consequently, this exclusion is not for the benefit of child health nor the family's well-being, therefore,

BE IT RESOLVED that the state medical society of Rhode Island vigorously supports the eradication of the fourteen day exclusion clause from all health insurance policies sold in the state.

* * *

II. RESOLUTION ON PEER REVIEW SUBMITTED BY SEEBERT J. GOLDOWSKY, M.D.

At the present time the following peer review mechanism, among the more prominent, are operative in Rhode Island as elsewhere:

- Hospital Mechanisms
 - Utilization review committees
 - Various combinations of audit, medical appraisal, medical records, tissue, mortality, credentials, and other committees.
- District Society Peer Review Committees
- Specialty Society Peer Review and Claims Evaluation Committees
- State Society Mediation Committee
- Blue Shield
 - Claims Review
- Professional Advisory Committee
- Medical Advisory Committee
- Blue Cross
 - Utilization Review
- Department of Social Welfare claims and utilization review mechanisms.

* * *

Reviews of various types may be requested by doctors, patients, insurance companies, the State

Department of Social Welfare, Blue Shield, and Blue Cross. There is presently no standard method for handling problems or inquiries, and there is often confusion and uncertainty over the proper channels which a request for opinion or adjudication should follow:

The following resolution is therefore offered:

That the President of the Rhode Island Medical Society appoint a special committee to study, in cooperation with other agencies as necessary, the proper place of county and specialty society peer review committees and their relation to other peer review mechanisms, recommended guidelines, channels, and points of entry for various types of inquiry or requests for opinion. This committee shall report to the House of Delegates not later than the last meeting prior to the 1972 Annual Meeting of the Society.

CHILD-SCHOOL HEALTH COMMITTEE

The Child-School Health Committee has met several times and will continue to meet, regarding problems, as we see them, in the entire format and philosophy of administration of health services to the school children of the state.

We are particularly concerned with the immense amount of duplication and waste effort involved in routine school exams and the filling out of meaningless school health forms. We have made, and will continue to make, recommendations for the streamlining of these procedures and, more importantly, ways of delivering decent health care to those children in the school systems who really need it.

Respectfully submitted:

WILSON F. UTTER, M.D.

Chairman

(Continued On Next Page)

Available Soon!

**MEDICAL RECEPTIONISTS
OFFICE ASSISTANTS**

Our graduates have received basic training in patient care techniques and medical office procedures; many have been personally tutored. School is state-approved. No fees.

Please Contact:

Mrs. Sandra S. Rich

Lafayette Academy

984 Charles Street

Providence, R. I. 02904

Telephone: (401) 723-6525

MEDICAL ASPECTS OF SPORTS COMMITTEE

The Committee on Medical Aspects of Sports reports that it is planning a one-day meeting on the Medical Aspects of Sports at one of the local hospitals or colleges late this Fall. The Committee is planning on inviting the members of the Rhode Island Medical Society as well as the various school coaches in the State of Rhode Island.

Respectfully submitted:

A. A. SAVASTANO, M.D.
Chairman

MATERNAL HEALTH COMMITTEE

A meeting of the Maternal Health Committee was held on June 28, 1971, at the home of Dr. John P. Wood in Westerly. Twelve members of the Committee were present. There were two invited guests, Dr. Joseph Hansagi, Pathologist at the Kent County Memorial Hospital, and Dr. John R. Evrard, Associate Director of Health Services, Brown University. This was the first meeting of the Committee since August 25, 1970. During these ten months only four new maternal deaths had occurred. Of these, only one was a direct obstetric death, two were indirect, and one was nonrelated.

Doctor Evrard, who was formerly a member of the Wisconsin Maternal Health Committee, has been interested in our Maternal Mortality statistics. He is making a study of the increase in non-related maternal deaths involving diseases of the central nervous system. It is hoped that this will be a subject for publication in one of our national journals in the future. A paper has also been submitted for publication comparing our five year statistics which were published in 1964 with those of the next five years (1965-1969). Our maternal mortality rate has decreased from 1.95 per 10,000 live births in 1964 to 1.37 in 1969.

The Chairman would like to take this opportunity to thank Dr. and Mrs. Wood for their hospitality in inviting us to their home for this recent meeting.

Respectfully submitted:

STANLEY D. DAVIES, M.D.
Chairman

CONTINUING MEDICAL EDUCATION COMMITTEE

Since the last report to the Society, the Committee on Continuing Medical Education has not

met as a whole, but individual members of the Committee have continued to be active in the preparation for the major Conference on Continuing Medical Education, sponsored by the Society in cooperation with other state agencies on September 18, 1971.

The Committee was pleased that the Conference was endorsed by the Council of the Medical Society and that the Society authorized up to an amount of \$300 in support of the Conference. An announcement concerning the Conference was published by the American Medical Association in its bi-weekly bulletin on continuing education activities at a National level and has now been distributed throughout the country. We have invited representatives of the other five New England States to attend, specifically, representatives of medical societies, the medical schools in the area and representatives of the State Boards of Medical Examiners. We anticipate a fairly good representation in attendance to this Conference on a regional basis and are hopeful that there will be significant representation from the 15 general hospitals in Rhode Island.

It is the intention of the Committee that as a result of this Conference, specific recommendations can be made to the Council of the Medical Society concerning the Society's future responsibilities for continuing education and the growing trend throughout the country for making continuing education mandatory for Society membership and perhaps even for maintaining a license to practice medicine. This action has already been taken by the State Legislature in New Mexico.

Respectfully submitted:

HENRY S. M. UHL, M.D.
Chairman

(To Be Continued)

Scanning The Medical Literature

CHRONIC DISCOID LUPUS ERYTHEMATOSUS TREATED BY PLASTIC SURGERY by Francesco Ronchese, M.D. *Chronica Dermatologica*, 2:105-106, 1971.

Report of a case so treated by the late Doctor Frank B. Littlefield of Providence, R. I. in 1941 and in excellent condition to date.

RHODE ISLAND MEDICAL JOURNAL

POSTVACCINAL SINUSITIS WITH SATELLITE LESIONS

Mary D. Lekas, M.D., F.A.C.S. 577

MATERNAL MORTALITY IN RHODE ISLAND

Stanley D. Davies, M.D., J. Kenneth Beezer,
M.D. and John R. Evrard, M.D. 581

ALCOHOL A HEALTH HAZARD

Laurence A. Senseman, M.D. 584

EDITORIALS 589

BOOK REVIEWS 575

DERMAQUIZ 591

PERIPATETICS 574

REPORT OF THE HOUSE OF DELEGATES 569

EDITORIAL STAFF

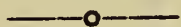
EDITOR-IN-CHIEF Seebert J. Goldowsky, M.D.

MANAGING EDITOR John E. Farrell, Sc.D.

ASS'T MANAGING EDITOR Edward J. Lynch, M.A.

SENIOR EDITOR EMERITUS Alex M. Burgess, Sr., M.D.

GRAPHIC CONSULTANT George Patton, Jr.



John A. Dillon, M.D., Chairman

Stanley M. Aronson, M.D.

Bertram H. Buxton, Jr., M.D.

Walter C. Cotter, M.D.

Robert P. Davis, M.D.

Herbert Fanger, M.D.

John F. W. Gilman, M.D.

Charles A. Hall, Jr., M.D.

Robert V. Lewis, M.D.

Peter L. Mathieu, M.D.

Henry T. Randall, M.D.

Guy A. Settipane, M.D.

NATIONAL ADVERTISING REPRESENTATIVE: State Medical Journal Advertising Bureau, Inc., 1010 Lake Street Oak Park, Illinois 60301.

RHODE ISLAND MEDICAL JOURNAL is owned and published by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society \$3.00 Annually). Second-Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1971.

House Of Delegates Of The Rhode Island Medical Society

Report Of The Meeting Of September 22, 1971

DISASTER COMMITTEE

The Disaster Committee has agreed to place the Emergency Medical Training course in the hands of the Rhode Island Junior College. The Committee will serve as an advisory body to the course entitled "Rescue Practices and Emergency Aid"

The teacher coordinator of the course is Capt. Ronald Jones of the Cranston Fire and Rescue Department. Members of the Society will be the physician instructors. A Subcommittee has been named to consider reimbursements to applicants who are in need of such funds for their participation in the course. The Scholarship Committee is comprised of John Marmaras, Associate Dean of Rhode Island Junior College; Mr. Harold Pace, Chief of the Emergency Medical Service, Rhode Island Department of Health; Capt. Jones, and myself. The first course started in September and was limited to 30 students. If an increased demand is made, the committee will consider the need for additional courses.

Respectfully submitted:

ROBERT L. CONRAD, M.D.
Chairman

RESCUE PRACTICES AND EMERGENCY AID COURSE

This course is designed to train Emergency Medical Technicians and other allied health and safety personnel for Emergency Care of the Sick and Injured at the Scene and During Transport. This course will include classroom experience and practical demonstration to familiarize the students with the use of rescue equipment.

* * *

PREREQUISITE: Certificate in Advance First Aid or the equivalent.

CLASS SIZE: Limited to 30.

Tuesday, September 21, 1971 at 7 p.m. Lecture #1
ORGANIZATION, REPORTS, AND LEGAL ASPECTS.

Tuesday, September 28, 1971 at 7 p.m. Lecture #2
OPERATING THE EMERGENCY VEHICLE.

(Includes driving, traffic control, and communication)

Tuesday, October 5, 1971 at 7 p.m. Lecture #3
ANATOMY AND PHYSIOLOGY.

Tuesday, October 12, 1971 at 7 p.m. Lecture #4
EVALUATION OF THE PATIENT, DIAGNOSTIC SIGNS AND SHOCK.

Tuesday, October 19, 1971 at 7 p.m. Lecture #5
RESUSCITATION, VENTILATION, AND THE USE OF OXYGEN.

Tuesday, October 26, 1971 at 7 p.m. Lecture #6
MEDICAL EMERGENCIES. (Includes poisoning, pulmonary edema, congested heart failure, the unconscious patient, and heart attack.)

Tuesday, November 2, 1971 at 7 p.m. Lecture #7
PEDIATRICS, COMMUNICABLE DISEASE AND EMERGENCY CHILDBIRTH.

Tuesday, November 9, 1971 at 7 p.m. Lecture #8
SURGICAL INJURIES. (Includes head injury, bleeding, burns, trauma, soft tissue injuries, gun shot wounds, pneumothorax, and eye and ear injuries)

Tuesday, November 16, 1971 at 7 p.m. Lecture #9
FRACTURES AND SPLINTING. (Includes spinal injuries and injuries to the extremities)

Tuesday, November 23, 1971 at 7 p.m. Lecture #10
PSYCHIATRIC AND DRUG PROBLEMS.

Tuesday, November 30, 1971 at 7 p.m. Lecture #11
ENVIRONMENTAL INJURIES. (Includes nuclear, electrical, heat and cold problems, water accidents, and welding injuries-

Tuesday, December 7, 1971 at 7 p.m. Lecture #12
EXTRICATION (extrication techniques)

Tuesday, December 14, 1971 at 7 p.m. Lecture #13

(Continued On Page 593)

R_x only: for better therapeutic control

Each Berocca Tablet contains:

| | |
|---------------------------|--------|
| Thiamine mononitrate..... | 15 mg |
| Riboflavin..... | 15 mg |
| Pyridoxine HCl..... | 5 mg |
| Niacinamide..... | 100 mg |
| Calcium pantothenate..... | 20 mg |
| Cyanocobalamin..... | 5 mcg |
| Folic acid..... | 0.5 mg |
| Ascorbic acid..... | 500 mg |

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B₁₂.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

in alcoholism

**Berocca[®] tablets
is therapy**

With balanced, high potency
B-complex and C vitamins.

No odor.

Virtually no aftertaste.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Hopkins

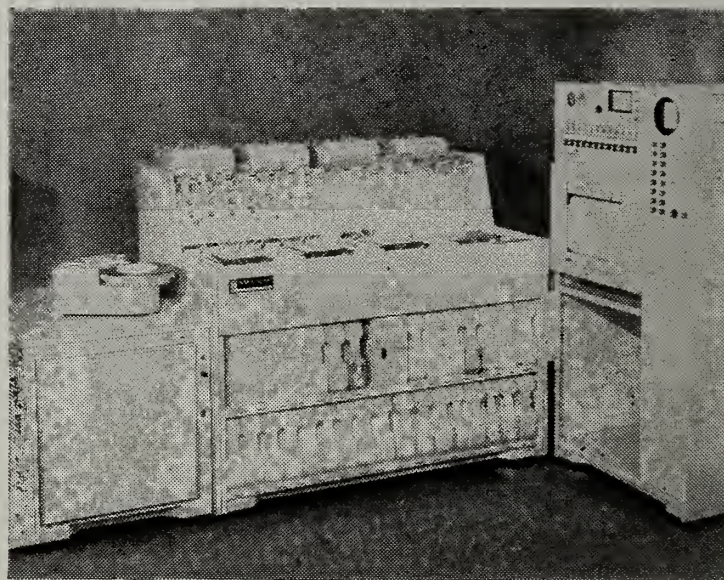
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

| | |
|---------------------|-------------------|
| CALCIUM | ALK. PHOSPHATASE |
| INORGANIC PHOSPHATE | LDH |
| GLOCOSE | SGOT |
| UREA NITROGEN | HEMOGLOBIN |
| URIC ACID | HEMATOCRIT |
| CHOLESTEROL | WHITE BLOOD COUNT |
| BILIRUBIN | RED BLOOD COUNT |
| TOTAL PROTEIN | MCH |
| ALBUMIN | MCV |
| GLOBULIN | MCHC |

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY

PROVIDENCE, R. I. 02909

TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

**IN ASTHMA
IN EMPHYSEMA**



*optional
therapy*



THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula

First choice

MUDRANE-2

*When ephedrine is too exciting
or is contraindicated*

MUDRANE GG

*During pregnancy or when K.I. is
contraindicated or not tolerated*

MUDRANE GG-2

A counterpart for Mudrane-2

MUDRANE GG ELIXIR

*For pediatric use
or where liquids are preferred*

*Clinical specimens
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



RELIEVE



**BACK
PROBLEMS**

Freeman
**SUPPORT for
WOMEN**
Model 423

Get relief from postural strain and many back conditions with a high degree of comfort. Three sets of adjustment straps permit "form-fit" control to suit individual needs. Elastic insets allow free movement for the wearer. "Cushioned for Comfort," this fine Freeman garment features downy soft Dacron-Pima Cotton. Easy to wash and dry. Cushioned stays.

ORTHOPEDIC SERVICES OF R. I.

340 Broad St., Providence, R. I. 02907

EL 1-0800

**COMPLETE LINE OF ORTHOPEDIC
APPLIANCES — SURGICAL SUPPORTS
HOME TRACTION
WALKERS — CRUTCHES — CANES**

Certified Male and Female Fitters

* * *

House Calls Upon Request

* * *

Ernest Hill — Certified Orthotist

James P. Casperson — Orthotist

Peripatetics

At the annual meeting of the Gen. Nathanael Greene Homestead Association, BENJAMIN F. TEFFT, the State's oldest practicing physician at 96, retired as association president. He served 51 years in office and was made president emeritus in appreciation of his patriotic service. Doctor Tefft is the last surviving member of the four-man committee which purchased the deteriorating homestead June 30, 1919. It was restored and made a historical shrine in memory of Washington's second in command in the War of Revolution.

* * *

WILLIAM S. KLUTZ, Chief of the Division of Nuclear Medicine and Director of the Division of Urology at Roger Williams General Hospital, has been elected President of the Rhode Island Heart Association. Klutz succeeds LELAND R. JONES.

* * *

ALDEN H. BLACKMAN of Providence has been elected as a fellow in the American College of Physicians.

* * *

JOHN A. DILLON, Chairman of the Publications Committee, SEEBERT J. GOLDOWSKY, Editor-in-Chief of the Journal, and EDWARD J. LYNCH, Assistant Managing Editor, attended the Biennial State Medical Journal Advertising Bureau Conference in New Orleans September 13 and 14.

* * *

THEODORE HERSH has joined the Department of Medicine at Rhode Island Hospital as Associate Physician-in-Charge of the Division of Gastroenterology.

* * *

H. FREDERICK STEPHENS, Surgeon-in-Chief in the Department of Ophthalmology at Rhode Island Hospital is organizing a Major Medical program in Laos at the request of its government. Stephens will establish a teaching program in eye surgery and diseases of the eye for Laotian physicians. He will also be the director of a team to train physicians and technicians in other specialties that are greatly needed in that country.

* * *

ALBERT S. MOST has been named Director of the Coronary Care Unit at Rhode Island Hos-

(Concluded On Page 594)

Book Reviews

SURGERY AND BIOLOGY OF WOUND REPAIR by Erle E. Peacock, Jr., and Walton Van Winkle, Jr. Philadelphia, W. B. Saunders Company, 1970. \$21.50.

Erle Peacock is a general surgeon, plastic surgeon, and hand surgeon who is interested in research, particularly wound healing. Collagen and collagen synthesis comprise his current forte.

In this book, Doctor Peacock and his co-author, Doctor Van Winkle, have presented under one cover the whole field of wound healing, coordinating basic research with clinical practice. They have thoroughly covered the body's largest organ — the skin — and gone on to discuss the other anatomical parts including tendons, fascia and muscle, nerves, bone, and finally the viscera.

These subjects have usually been found as portions of other texts, but here they are covered under the one general subject of "wound healing", incorporating biology and research with practical clinical application, replete with photographs and instructions. As would be expected, the author's personal interests show, but not to the detriment of the whole. The arrangement of presentation, bibliography, suggested readings, and index make it a valuable reference book for all surgeons. To quote from the preface: "just as important, we have attempted to demonstrate to basic scientists that there is a real discipline known as human biology, and that wound healing is an area of investigation in which the best of scientific thought and practice can be truly utilized with gratifying results."

RICHARD P. SEXTON, M.D.

HANDBOOK OF LEGAL MEDICINE by Alan R. Moritz and R. Crawford Morris. Third Edition. Saint Louis, The C. V. Mosby Company, 1970. \$8.75.

The early chapters of this handbook are dedicated to forensic medicine, which is a field in which many physicians are uninterested and in consequence woefully ignorant. It becomes important when the practicing physician encounters a case of death by violence, an unexplained death, lack of identity, a bullet wound, and drowning.

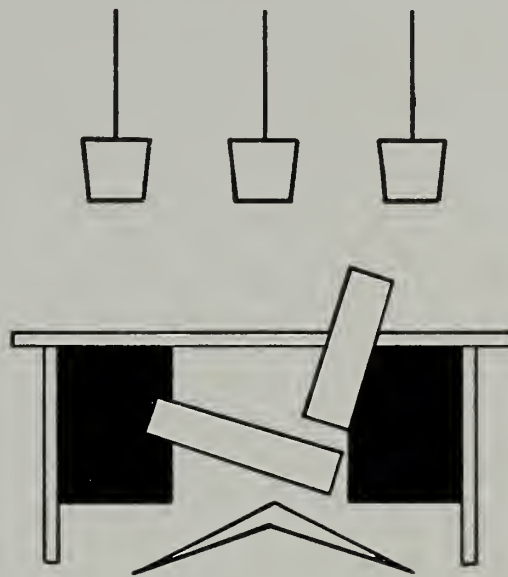
The book emphasizes the duty of the physician when he is the first person to encounter such a case. His detailed observations may make all the difference between a verdict of suicide or murder

(Concluded On Page 594)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

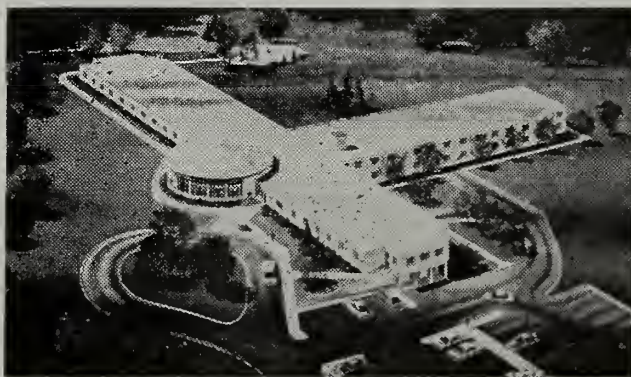
36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

CEDAR CREST NURSING CENTRE

125 Scituate Ave., Cranston, R. I. 02920

(Approved Medicare Home)

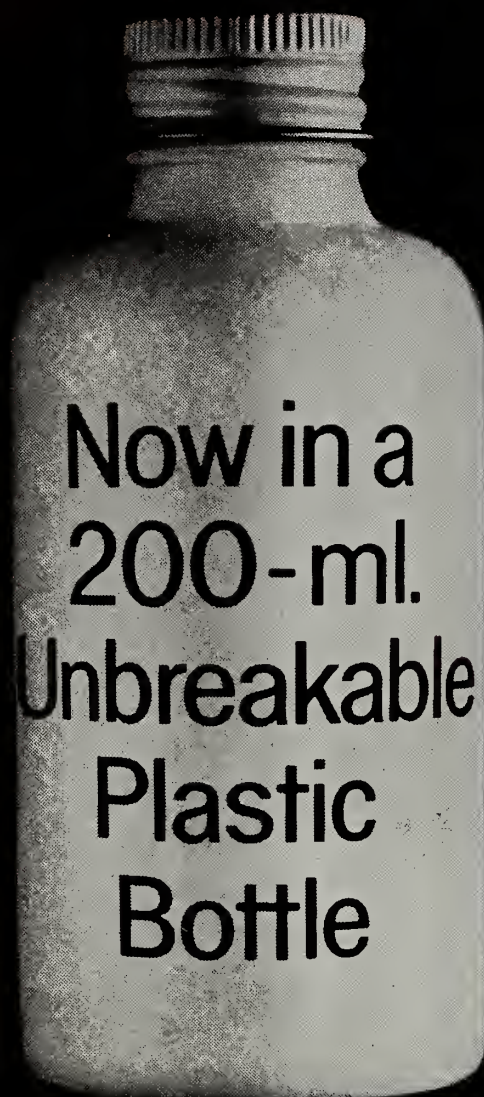


*New England's Newest and Most
Modern Approved Extended Care
Facility*

**Active Medical Staff — Registered
Professional Nurses on All Shifts**

**SERVICES AVAILABLE: Occupational Ther-
apy, Physiotherapy, Speech Therapy,
Inhalation Therapy**

For Information — Call 944-8500



Now in a
200-ml.
Unbreakable
Plastic
Bottle

Same price as
150-ml. size*

Two dosage
strengths—
125 mg./5 ml.
and
250 mg./5 ml.

V-Cillin K[®], Pediatric

potassium
phenoxymethyl
penicillin



100210

*Additional information
available to the
profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206

**Based on Lilly selling price to wholesalers.*

Postvaccinal Sinusitis with Satellite Lesions

Serious Complication of Smallpox Vaccination Provides Text For Discussion Of Prevention And Treatment

By Mary D. Lekas, M.D., F.A.C.S.

Smallpox still prevails throughout the world; 400,000 cases are estimated to occur yearly, especially in Asia, Africa, and Central, and South America.¹ Some of the most extensive investigations have been undertaken in India; Madras has had several outbreaks; and it is said that Madras is one of the best vaccinated cities in the world. About 90 per cent of the population of Madras have had one or more vaccinations, the remaining 10 per cent consisting largely of migrants. Vaccination is compulsory between 6 months to one year of age; the public health organization is such that a very high percentage of eligible infants are vaccinated. Kempe et al. state "After transplacental passive immunity of the newborn has waned, age *per se* can be said to be unimportant in determining susceptibility to smallpox. However, immunity due to previous vaccination or to previous contact with the variola virus might well vary with age in such an endemic area for smallpox as Madras, where outbreaks occur annually."^{2,5}

Most of the population of the United States

MARY D. LEKAS, M.D. Surgeon, Department of Otolaryngology, Rhode Island Hospital; Consultant, U. S. Veterans Administration Hospital, Providence, Rhode Island.

have had repeated vaccinations against smallpox. Neff and his group³ estimated that there were over 14 million smallpox vaccinations given in 1963 and approximately 433 complications. These represent the more serious complications for which vaccinia immune globulin was given. Seven people died in 1963 following smallpox vaccinations, two with eczema vaccinatum and five with postvaccinal encephalitis. Kempe⁴ had analyzed questionnaires from almost 20,000 physicians and estimated about 3,000 complications from smallpox vaccinations in 1963.

CASE REPORT

This is the report of an adverse reaction to smallpox vaccination characterized by autoinnoculation to the nose and paranasal sinuses, and other satellite lesions. (See Figure 1) This 10 year old male patient was referred to me by a pediatrician for emergency admission because of a large nasal lesion obstructing the left nasal chamber and swelling of the left side of the face from a secondary sinusitis. There were also satellite lesions of the upper lip and right hand. The temperature on admission was 102.6, pulse 116, respirations 24, blood pressure 114/70; examination was otherwise essentially within normal limits. Two days prior to ad-

(Continued On Next Page)



Figure 1

mission the patient had received a smallpox vaccination. This had not been done at an earlier age because of patient's history of eczema.. Laboratory findings were: hemoglobin 11.7 gm; 35 per cent micro-hematocrit; white blood cell count 5,000 with 64 per cent neutrophils; 6 band forms; 22 lymphocytes, 6 monocytes and 2 basophils. There were slight hypochromia and slight anisocytosis, and platelets were present. Urinalysis was normal. Purulent drainage from the left nostril revealed a very heavy growth of *Staphylococcus aureus*, coagulase positive. Chest x-ray study was normal. Sinus x-ray studies revealed a diffuse clouding of the left maxillary antrum consistent with an active sinusitis, and slight thickening of the ethmoidal sinus. The patient appeared toxic, but did not act so. Intravenous ampicillin, Dime-tapp® Elixir, Chymoral® tablets and aspirin were administered, and soaks were applied to the involved area of the left side of the face. The patient ran a febrile course for five days. After a few days, the ampicillin was given by intramuscular injection, and later orally. Hyperimmune vaccine gamma globulin was given as soon as it was available from the Cornell University Medical Center in New York (it can now be procured from Boston). Ten ml of hyperimmune gamma globulin was given. The improvement was marked as soon as the vaccine was given, (See Figure 2) and the patient was discharged home, improved, in one week. There was some excitement involved in making contact for the procurement of the hyper-

immune gamma globulin, especially since this was a weekend. Many phone calls and arrangements had to be made. The material was sent air express on a late Saturday afternoon. The police picked up the vaccine at the airport. This was done at no cost to the patient.

Within twenty-four hours of injecting the hyper-immune gamma globulin, the patient's lesions began to clear. Forty-eight hours after injection there was almost no exudate present, and the patient's temperature was normal. Sinus x-ray studies showed clearing by the following week.

DISCUSSION

The infectious nature of smallpox vaccine is such that patients may transfer infection to other bodily areas and to other individuals. According to Menzin: "Secondary vaccinations and pyogenic infections are the commonest complications and are caused by autoinoculation from finger transfer or scratching. Local cellulitis, scarlet fever, erysipelas, or septicemia may occur. Tetanus, at one time a rather common complication, is practically

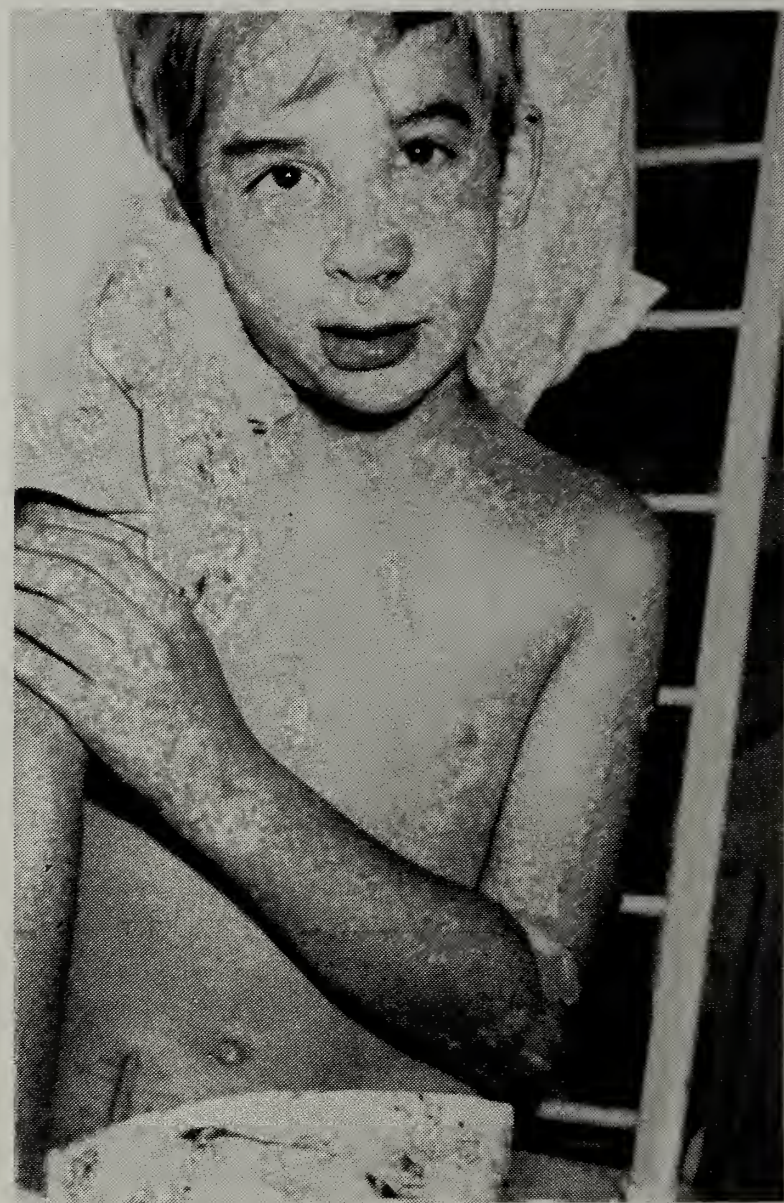


Figure 2

unheard of today.”⁷ Satellite lesions develop at a distance from the vaccination site as a result of either (1) skin contamination (accidental inoculation vaccinia; my patient claims that it occurred after playing baseball!) or (2) blood-borne spread (generalized vaccinia). With the latter, after primary smallpox vaccination, the virus multiplies locally at the injection site and enters the blood. It then disappears from the circulation as neutralizing antibodies appear towards the end of the first week. The antibody response is lacking in some individuals, and perhaps the cellular defense mechanisms of the skin are defective. The most common sites of contamination are the eyelids, lips, and vulva.^{8,9} Secondary bacterial infections superimposed on the vaccination and its satellite lesions can be a grave condition, and have been fatal. Fortunately, several cases have been saved by hyperimmune vaccinia gamma globulin; it is given intramuscularly in doses of 0.6 to 1.2 ml/kg body weight (or 0.2 ml per lb in adults, 0.05 ml per lb in children).^{2, 6}

In recent years there has been great improvement in the development of the hyperimmune gamma globulin. Volunteer recruits from the armed forces donate a pint of blood between the third and eighth week following inoculation. About five ml of gamma globulin (1.69 mg per ml) is made from the one pint of blood. Commercial blood processing laboratories prepare the gamma globulin in the usual way, using the Cohn fraction II method; then routine testing is performed at the National Institutes of Health, and is then packed in five ml ampules for distribution. This is a regular service of the blood program of the American National Red Cross at no cost to the patient.¹⁰

The administration of the passive antibody in the form of the hyperimmune vaccinal gamma globulin might be presumed to provide sufficient antibodies to terminate viremia promptly and prevent further satellite lesions until the patient's own defenses can be brought to take over. This in itself is encouraging enough to continue and to expand the use of hyperimmune vaccinal gamma globulin in the prophylaxis and therapy of serious complications of smallpox vaccination.

Methisazone (Marboran®) has also been used with the hyperimmune vaccinal gamma globulin in the treatment of complications; this drug is said to act against the virus multiplying in the cells. As cited by Coskey and Bryan: “Jaroszynska-

Weinberger and Meszaros found in a series of 55 children, vaccinated in spite of contraindications, who were given either vaccinia immune globulin or methisazone, that those given methisazone had smaller local vaccination reaction and these reactions healed faster than those patients treated with vaccinia immune globulin alone. Both drugs prevented vaccination complications. Methisazone is used in a dosage of 200 mg/kg orally initially followed by 50 mg/kg every six hours for three days. It should be stopped for three days and repeated again if necessary.”⁶

Copeman's paper revealed that both local and general complications of smallpox and vaccinia are probably less common in A and B blood group patients. Copeman stated that “The viruses appear to be antigenically related to A antigen and such patients possess Anti- A in their serum (Roberts, 1963).”⁸

Malignant melanoma has been found as a late complication in vaccination scars; also, there have been several reports of squamous and basal cell epithelioma occurring in vaccination scars. There have also been reports of benign tumors. This may be a reflection of the increased liability of scar tissue to undergo neoplastic change. Keloids and hypertrophic scars are another common complication.⁸

The following *precautions* are recommended:

1. Persons with atopic eczema or other forms of dermatitis should not be vaccinated, especially those characterized by open lesions, as this procedure may be followed by eczema vaccinatum, a severe and potentially fatal disease. Also, a child should not be vaccinated if any member of his family has eczema or any other skin disorder. If a relative of a child with atopic eczema is vaccinated, the relative must be completely separated from the child for about 21 days. Recently vaccinated patients should be excluded from pediatric wards containing patients with atopic eczema, diseases of the skin, healing surgical wounds, or burns.¹¹

2. Secondary bacterial infections are treated with the appropriate antibiotic medication as determined by culture and sensitivity studies. The nonviral eruptions usually resolve spontaneously with symptomatic treatment. Steroid treatment should be avoided, but antihistamines and soothing topical lotions or baths are helpful.

3. Autoinnoculation should be treated with

(Continued On Next Page)

hyperimmune vaccinia gamma globulin. Methisazone has also been used alone and in conjunction with the vaccinia immune globulin; both drugs have prevented vaccination complications.

If a patient with clinical contraindication to vaccination absolutely required the vaccination, the patient should be given the hyperimmune gamma globulin, or methisazone, or both agents with the vaccination.

Vaccination is contraindicated in tuberculosis, hypogammaglobulinemia, dysgammaglobulinemia, lymphoma, and blood dyscrasias, as well as in patients on corticosteroids, chemotherapy, anti-metabolite treatment, or radiation therapy.⁶ Pregnant women should not be vaccinated because of the risk of fetal damage and possible abortion. The virus is said to cross the placenta and infect the fetus within 24 to 48 hours, where it incubates for 10 to 12 days. Since the fetus has little power to form antibodies. The disease is usually fatal, either in utero or after birth.¹² However, in the face of an epidemic, vaccination risks must be accepted.

According to Menzin: "Primary vaccination is preferably carried out between 4 and 6 months of age, and it should certainly be performed during the first year of life for, at this time, reactions are mildest and the danger of postvaccinal encephalitis is minimal. Routine vaccination during the first few weeks of infancy, before breast or artificial feeding is established and while there may be maternal transmitted immunity, should be discouraged."⁷

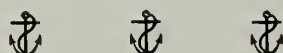
CONCLUSIONS

Physicians should be aware of the complications of smallpox vaccination, contraindications, and treatment.

Even with appropriate prophylaxis, complications cannot always be avoided.

REFERENCES

- ¹Lundstrom R: Complications of smallpox vaccination and their treatment with vaccinia immune gamma globulin. **J Pediat** 49:129-40, Aug 56
- ²Kempe CH, Berge TO, England B: Hyperimmune vaccinal gamma globulin. Source, evaluation, and use in prophylaxis and therapy. **Pediatrics** 18:177-88, Aug 56
- ³Neff JM, Lane JM, Pert, JH, et al.: Complications of smallpox vaccination. I. National survey in the United States 1963. **N Engl J Med** 276:125-32, 19 Jan 67
- ⁴Kempe CH, Benenson AS: Smallpox immunization in the United States. **JAMA** 194:161-6, 11 Oct 65
- ⁵Peirce ER, Melville FS, Downie AW, et al.: Anti-vaccinal gamma-globulin in smallpox prophylaxis. **Lancet** 2:635 8, 20 Sep 58
- ⁶Coskey RJ, Bryan HG: Cutaneous complications of smallpox vaccination. **Michigan Med** 66:957-62, Aug. 67
- ⁷Menzin AW The present status of smallpox vaccination. **Med Times** 89:227-36, Mar 61
- ⁸Copeman PWM: Skin complications of smallpox vaccination. **Practitioner** 197:793-800 Dec 66
- ⁹Nelson WE et al. editors: **Textbook of Pediatrics**. Ninth edition. Philadelphia W.B. Saunders, 1969. Pp. 646-7: Vaccination against smallpox, complications
- ¹⁰Harger RW, Arata LA: Vaccinia immune globulin used for vaccinia of eyelids. **J Indiana State Med Assoc** 53:1321-3, Jul 60
- ¹¹Reynolds AH, Joos HA: Eczema vaccinatum. **Pediatrics** 22:259-67, Aug 58
- ¹²Naidoo P, Hirsch H: Prenatal vaccinia. **Lancet** 1:196-7, 26 Jan 63



E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.

GA Spee 1-2512

Pharmacy License No. 225

Curran & Burton

DIVISION OF TEXACO INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

INDUSTRIAL AND WHOLESALE
FUEL OILS

Maternal Mortality in Rhode Island

Study Suggests Areas Where Improvement May Be Sought

By Stanley D. Davies, M.D., J. Kenneth Beezer, M.D. and John R. Evrard, M.D.

All maternal deaths in Rhode Island in a five-year period, 1965 through 1969 have been reviewed. This is a report of an analysis of this material and a comparison with the statistics of the previous five-year period.

Maternal mortality is dependent on many interwoven components, some of which are readily apparent, others less overt. Among the former are:

- 1) Skill, training and judgment of the physician
- 2) Availability of blood, blood substitutes, and blood products
- 3) Development of new antibiotics and techniques for combating sepsis
- 4) Increased knowledge concerning anesthesia as applied to the pregnant woman

STANLEY D. DAVIES, M.D., *Chairman, Maternal Health Committee, Rhode Island Medical Society*

J. KENNETH BEEZER, M.D., *Secretary Maternal Health Committee, Rhode Island Medical Society*

JOHN R. EVRARD, M.D., *Associate Director, Health Services, Brown University*

- 5) Competent and continuous anesthesia coverage for the obstetrical service
- 6) Development and utilization of new methods of monitoring the gravid female, the parturient, and the fetus
- 7) Prevention and prompt treatment of the toxemias of pregnancy
- 8) Increased understanding and improved management of diseases incidental to pregnancy
- 9) Availability of obstetric and other types of consultation
- 10) Efficient and safe transport systems for the patient suffering life threatening complications
- 11) Utilization of special centers for care and delivery of the high risk mother and the high risk neonate

Factors more subtly influencing maternal mortality are the economic level of the patient, and her educational, cultural, and racial background. The impact of such variables, while not completely understood, is nevertheless affirmed by vital statistics which demonstrate significantly higher ma-

(Continued On Next Page)

Table 1
Maternal deaths 1960 through 1964³ and 1965 through 1969

| | 1960 through 1964 | | 1965 through 1969 | |
|---------------------------------|-------------------|----------------|-------------------|----------------|
| | No. | total deaths % | No. | total deaths % |
| Total live births | 92,258 | | 80,061 | |
| Total maternal deaths | 41 | 100 | 27 | 100 |
| Direct obstetric deaths | 18 | 43.9 | 11 | 40.7* |
| Indirect obstetric deaths | 11 | 26.8 | 2 | 7.3+ |
| Nonrelated deaths | 10 | 24.4 | 13 | 42.1 |
| Unclassified deaths | 2 | 4.9 | 1 | 3.9 |
| Maternal mortality rate | 1.95/10,000 LB | | 1.37/10,000 LB* | |

*Not significant
+P<0.01

ternal mortality in the underprivileged. Webster,¹ and Llorens, Griner, and Thompson² have established that poverty is more influential than race in increasing maternal mortality. In both of these studies, the white maternal mortality was higher than in the Negro population in socially deprived peoples.

Davies and Beezer⁵ reviewed the maternal mortality of Rhode Island from 1960 through 1964. Because of the limited population of Rhode Island and consequent limited number of births, they reported on five years' experience rather than reviewing by year. Table 1 shows a comparison of the 1960-1964 and 1965-1969 periods.

Rhode Island has enjoyed a low maternal mortality because of its excellent obstetrical care and facilities and its somewhat favored demographic structure. In 1965, the approximate midpoint of the two study periods, the population of Rhode Island was 892,709 of whom 25,444 (2.7 per cent) were nonwhite. The monthly average number of people on AFDC* was 23,862^{4, 5}. In order to consider race and poverty in proper context with regard to maternal mortality, the reader is referred to Table 2 which expresses these relationships.

METHOD OF STUDY

The *Guide For Maternal Death Studies*,⁶ published by the American Medical Association, was followed in classifying the deaths. All deaths during pregnancy, or those occurring within 90 days

*Aid to Families with Dependent Children

Table 2
Population of Rhode Island 1969 by race and welfare status.⁴

| | |
|--|---------|
| White | 892,709 |
| Non-white | 25,444 |
| Total | 918,153 |
| Average number of welfare cases/mo. | 23,862* |

*1965 annual Report of Public Assistance⁵ of Rhode Island.
aged.⁷

Table 3.
Direct causes of obstetric deaths 1960 through 1964³ through 1969

| | 1960 through 1964 | | 1965 through 1969 | |
|--|-------------------|----------------|-------------------|----------------|
| | No. | Total deaths % | No. | Total deaths % |
| Direct obstetric deaths.... | 18 | 100 | 11 | 100 |
| Hemorrhage | 11 | 61 | 2 | 18.18* |
| Ruptured uterus | 4 | | | |
| Ectopic pregnancy | 3 | | | |
| Abruptio placenta | 2 | | | |
| Postpartum atony | 2 | | | |
| Abortion, alleged | | | 1 | |
| criminal | 0 | | 1 | |
| Infection | 3 | 16.7 | 7 | 63.64* |
| Abortion, alleged | | | | |
| criminal | 1 | | | |
| Ectopic pregnancy with sepsis & multiple pulmonary emboli | 1 | | | |
| Thrombophlebitis with pulmonary emboli | 1 | | | |
| Septic shock | 0 | | 1 | |
| Peritonitis | 0 | | 6 | |
| Toxemia | 1 | 5.6 | 0 | 0 |
| Other | 3 | 16.7 | 2 | 18.18 |
| Anesthesia | 2 | | 0 | |
| Pulmonary embolus | 0 | | 1 | |
| Amniotic fluid embolus | 1 | | 1 | |

*P<0.01

of the termination of the pregnancy, were included in calculating the maternal death rate. Categories utilized in classifying deaths were direct obstetric causes, indirect obstetric causes, nonrelated causes, and unclassified causes. Preventability or nonpreventability was evaluated only for direct and indirect obstetric deaths. The total number of maternal deaths from 1965 through 1969 was 27, of which 11 were due to direct causes, 2 to indirect causes, and 14 to nonrelated or unclassified causes (Table 1). This compares with 41 maternal deaths in the 1960-1964 period, of which 18 were due to direct causes, 11 to indirect causes, and 12 to nonrelated or unclassified causes. Deriving the maternal mortality rate by using direct obstetric deaths as the numerator and the number of live

Table 4.
Antecedent events in deaths due to direct obstetric causes 1965 through 1969

| Antecedent Events | Terminal cause of death |
|--|-------------------------|
| *Aspiration, bronchopneumonia, abruptio placenta and pre-eclampsia | Sepsis |
| Premature rupture of membranes, septic shock | Sepsis |
| Postpartum uterine atony | Hemorrhage |
| Pulmonary embolus | Embolus |
| *Cephalopelvic disproportion | Sepsis |
| Relative cephalopelvic disproportion, amniotic fluid embolus | Embolus |
| *Transverse lie, peritonitis, and septic shock | Sepsis |
| *Repeat cesarean section, rupture of cecum, and peritonitis | Sepsis |
| *Carcinoma in situ of cervix, cesarean hysterectomy, pelvic abscess, and peritonitis | Sepsis |
| *Placenta previa, peritonitis, and septic shock | Sepsis |
| Criminal abortion hemorrhage | Hemorrhage |
| *Death following cesarean section | |
| *Deaths following Cesarean section | |

Table 6.
Nonrelated obstetric deaths and unclassified deaths 1960 through 1964³ and 1965 through 1969

| Cause of Death | 1960 through 1964 | 1965 through 1969 |
|---|-------------------|-------------------|
| Nonrelated | 10 | 13 |
| Suicide | 2 | 0 |
| Ruptured cerebral aneurysm | 3 | 3 |
| Meningitis | 1 | 1 |
| Cerebellar Cyst | 0 | 1 |
| Subdural Hematoma (Traumatic) | 0 | 1 |
| Auto accident trauma | 0 | 1 |
| Epilepsy | 1 | 0 |
| Reticular cell Sarcoma | 1 | 0 |
| Hodgkins disease | 1 | 0 |
| Acute Leukemia | 0 | 2 |
| Thrombocytopenic purpura (Mosskowitz disease) | 0 | 1 |
| Porphyria | 1 | 0 |
| Poison (accidental) | 0 | 1 |
| Malignant tumor with metastasis | 0 | 1 |
| Drug addict, cirrhosis and pneumonia | 0 | 1 |
| Unclassified | 2 | 1 |

births (LB) as the denominator, the rate for the earlier study was 1.95/10,000 LB and for the later survey period 1.37/10,000 LB.

CAUSE OF DEATH

Direct obstetric causes. In comparing the 1960-1964 series with the 1965-1969 series, it is evident that there was a significant drop in deaths due to hemorrhage and a rise in deaths due to sepsis. Table 3 shows that these changes were both absolute and proportional with regard to

Table 5,
Indirect causes of obstetric deaths 1960 through 1964³ and 1965 through 1969

| Cause of Death | 1960 through 1964 | 1965 through 1969 |
|---|-------------------|-------------------|
| Cardiac | | |
| Indirect obstetric deaths | 11 | 2 |
| Subacute bacterial endocarditis | 2 | 0 |
| Rheumatic heart disease | 2 | 0 |
| Coarctation of aorta | 1 | 0 |
| Primary pulmonary hypertension | 1 | 0 |
| Pulmonary complications | | |
| Lobar pneumonia | 1 | 0 |
| Staph. pneumonia with pulmonary infarction | 1 | 0 |
| Thrombophlebitis with pulmonary embolus | 0 | 1 |
| Appendicitis with rupture | 2 | 0 |
| Miscellaneous | | |
| Postabortal psychosis with suicide | 1 | 0 |
| Unclassified liver disease | 1 | 0 |
| Brain atrophy probably due to cerebral hemorrhage | 0 | 1 |

Table 7.
Responsibility for preventable deaths 1960 through 1964³ and 1965 through 1969

| Assigned Responsibility | 1960 through 1964 | 1965 through 1969 |
|---|-------------------|-------------------|
| Patient | 5 | 0 |
| Attending physician | 8 | 5 |
| Hospital | 1 | 0 |
| Consultant | 1 | 0 |
| Anesthetist | 2 | 0 |
| Attending physician and consultant | 0 | 2 |
| Attending physician, consultant, and hospital | 0 | 1 |
| Patient and attending physician | 0 | 1 |
| % preventable | 59% | 70% |

cause of death. In the 1965-1969 study, there were no deaths associated with ruptured uterus. Seven deaths were of a septic nature, 6 of which followed cesarean section, while one followed premature rupture of the membranes. The national trend in recent years has been a proportionate and absolute increase in the number of deaths due to sepsis, primarily the result of criminal abortion. While Rhode Island has similarly experienced a rise in sepsis deaths in the 1965-1969 group, none have been due to septic abortion. In this group, the events antecedent to the patients' demise are listed in Table 4.

Indirect causes. Table 5 summarizes the indirect causes of death and is self-explanatory.

Nonrelated and unclassified causes. Table 6

(Concluded On Page 592)

Alcohol A Health Hazard

Author Urges Program Of Educated Voluntary Prohibition Of Alcohol

By Lawrence A. Senseman, M.D.

Mr. President, Mr. Chairman, Ladies and Gentlemen:

It is, indeed, a high honor for me to deliver this keynote address to the Gandhi Centenary International Conference on Prohibition.

I have long been an admirer of Mahatma Gandhi and his monumental contribution to India. What was Gandhi's greatest contribution? Khan Abdul Ghaffer put it this way: "He inculcated in Indians courage to demand freedom — taught the lesson of non-violence. It was through him that freedom came, non-violence was not of the weak but of the brave.

"We cannot enhance this status through praise

LAWRENCE A. SENSEMAN, M.D., *formerly of Lincoln, Rhode Island, was associated for two years with the Christian Medical College in Vellore, South India. Doctor Senseman now resides in Glendale, California and is Associate Clinical Professor at Loma Linda University.*

Read at Gandhi Centenary International Conference on Prohibition, New Delhi, India, January 25-30, 1970.

nor can we lower him in the estimation of the world through criticism. He was and will be what he was, great."¹

U Thant, U.N. Secretary-General, has said "Gandhiji's philosophy, to me, has a meaning and a significance far beyond the confines of his country or of his time. Many of his principles have universal application and eternal validity, and I hope the passing years will show that his faith in the efficacy of non-violent pressure as an agent for peaceful change is as justified today all over the world as it was in his time in India."²

"Gandhi's uniqueness lies in projecting these sterling personal moral virtues on to the wider fields of collective socio-political life and action. He translated his passionate spiritual quest into an equally passionate struggle to ensure the freedom and dignity of the human spirit everywhere." (Swami Ranganathananda).³

Gandhi did not drink. He made clear on numerous occasions his opposition to alcohol. He recognized its deleterious effect on its victims, and stated that it added nothing but further poverty

and sickness to its habitual users. He was for the abolition and prohibition of this great evil menace to mankind. One of your great constitutional objectives, towards which India is striving, is a sane and workable control of this product and its inherent abuse. We wish you well as you chart the difficult course through the troubled waters of objection, ridicule, obstruction, apathy, and assault against the best laid plans for prohibition.

In a speech on prohibition delivered in March 24, 1925 in Madras, Mahatma Gandhi said, "I am inclined to think that if I had to give a decided opinion, I would vote against drinking, because drinking saps the moral foundation." He must have felt strongly on this for he also said, "I would sacrifice the education of all our children, if we could not educate them without this revenue (from tax on sales of alcohol)."⁴

He also spoke with considerable insight when he said, "The drink habit is one of no little danger; if we can get rid of that habit, the people can save crores (tens of millions) of rupees, and many wicked things will cease."

Another statement shows his familiarity with the adverse effects of even a small amount of alcohol — could we add, social drinking. "However small the quantity of liquor taken, it cannot but have an intoxicating effect, one's reason is bound to be clouded in consequence, be it ever so little, and in such a state, the conscience certainly becomes weak."

His suggestions⁴ on how to accomplish his objective might be well to reflect on; he said: "We must free the people from the habit of drinking liquor, . . . by pressure and by persuasion. . . ."

"Every community should pass a resolution forbidding consumption of liquor and boycott those who violate it."

Strong forceful words from your great leader.

Let me quote⁴ one more timely suggestion Mahatma Gandhi made: "The most important reform, however, which the people can bring about is to see that drinking liquor is forbidden." His recommendations were a part of the self-purification movement in India with which you are very familiar.

It is, therefore, fitting that we here in observance of the Centenary of Mahatma Gandhi's birth give positive evidence in support of a major cornerstone of his program to lift India up to greater achievements and higher moral standards.

I am sure that everyone assembled here will agree that the abuse of alcohol as a beverage is a

health hazard, or a threat to one's health. The question then is how little or how much constitutes abuse? Over what period of time do changes take place in human tissue constituting damage or disease? What type or concentration of alcohol does the most harm, some harm, or no harm at all? Does the potential alcoholic have some fundamental personality or physiological component that is more vulnerable to alcohol when taken internally? Is there some cultural or national characteristic that tends to produce more alcoholics or less alcoholism?

Many of those seeking an answer to this difficult and complex problem find it hard to find any one common denominator except that it can be a toxic and lethal substance to a large number of people of all races and creeds of those that use it.

Is alcohol a real health hazard? Let us take a look at this unique chemical compound. Its structure makes it possible to be absorbed through the stomach and first part of the intestine, the jejunum, directly into the bloodstream, one of the very few substances that can be. The alcohol content of the blood can be measured almost immediately after a drink by sensitive chemical analysis. This is the basis for blood alcohol tests on suspected drivers involved in traffic accidents.

The blood goes through the entire circulatory system and thus to every tissue in the body.⁹ Some tissues, such as the brain, absorb 6-7 times as much as any other tissue in the body, and more rapidly. Hence the first symptom of alcohol's effect is on the central nervous system and its functions. This includes the highest functions of the brain: thinking, judgment, reasoning, reflex, and responses. The circulation of alcohol in the blood reaches all the vital organs and affects each in turn, to the degree in which it is absorbed by that organ or tissue. Thus some vital organs are more likely to be affected than others.

Finally the alcohol that has not been absorbed reaches the liver. This great organ, the largest in the body, is virtually a chemical laboratory. One of its functions is to remove all toxins from the circulatory system and convert (oxidize) them into harmless substances that can be easily eliminated from the body as wastes. In the case of alcohol 90 per cent of the alcohol ingested into the body is finally changed into CO² and H²O. This complicated process of metabolism is not without its dangers, because one of the by-products

(Continued on next page)

of alcohol oxidation is an aldehyde, acetaldehyde to be exact, and this has a damaging effect on the cells at the liver. Over a long period of time the cells of the liver are destroyed, and this causes scarring, a condition familiar to all, namely, cirrhosis of the liver. This is a definite health hazard, and the risk taken, when alcohol is used, is aggravated when foods, especially those containing Vitamin B are not eaten. The theory that Vitamin B deficiency is responsible for cirrhosis has been disproven by recent scientific experiments on laboratory animals.⁹

These men stated that "hepatic (liver) dysfunction" does exist in well nourished alcoholic patients. This was proven by sensitive liver function tests. They also pointed out that abstinence from alcohol allows liver function to return to normal within 3-4 weeks. "Regardless of (the patient's) nutritional status, alcohol can directly damage the liver without apparent physical signs or symptoms of hepatic (liver) disease."⁹

Is drinking alcoholic beverage a health hazard to the liver? Yes.

Electrolytes (body fluids and certain other important elements) are essential to normal healthy functioning of the body. Much work has been done and is being done in this vital area to preserve life; especially after surgical operations; adverse living conditions, such as extreme heat and cold.

Alcohol ingestion may alter this vital chemical mechanism which is very sensitively balanced. It does this by expanding the total body water. Thus the edema of the brain and other organs is a direct result of drinking alcohol, and it can produce serious effects on the body. The electrolytes return to normal within 1-2 weeks, after drinking stops.⁹ Is drinking alcohol a health hazard? To the electrolytic system? Yes.

Another recent and significant development in the study of alcoholism is related to plasma lipids (fat). "One of the most striking effects of alcohol is on lipid metabolism in the alcoholic patient, hyperlipemia, hypertriglyceridemia, fatty liver or both." This same study said, "Thus alcohol can produce significant alterations in plasma lipids regardless of how nutritious the diet may be." Abstinence from all alcohol allows lipid levels to return to normal range within 4 weeks. Is drinking alcohol a health hazard? In relation to plasma lipids? Yes!

One of the more recent developments in the study of the alcoholic, as a sick person, is its adverse effects on the cardiovascular system. This

has recently been demonstrated by the use of the electronic microscope on the heart muscle of the alcoholic. These same authors point out that alcohol, (1) adversely affects metabolism of the myocardium (heart muscle), (2) increases the work load on the heart, (3) produces cell death in cardiac tissue.

In spite of the fact that some physicians still prescribe alcohol in tonic doses for cardiac patients, it has been proven that (1) "coronary blood flow is also significantly decreased," (2) that there is an "impairment of myocardial contractility," and (3) "myocardial metabolic response was also altered."

It is true that there is a "dose-dependent relationship in regard to adverse effects of alcohol on the heart muscle and peripheral circulation."⁹

Their conclusion was rather conservative: "The use of alcohol may be contra-indicated in the treatment of cardiovascular disease." Is alcohol a health hazard? To the heart? Probably yes!

As far as the circulatory system is concerned, another point I would like to stress here is that acute blood loss in the intoxicated patient is a common medical emergency. It is particularly true in the head-injured alcoholic, one who may be bleeding subdurally, intracranially. These patients may die of such an injury if it is not recognized and treated expeditiously.

Example: A 50-year-old mill superintendent attended a cocktail party. Not a drinking man, he took a few drinks. Later he fell off a chair and struck his head on the floor; at the time it seemed minor, but he was taken home by friends and put to bed. When he did not awaken as usual in the morning, his alarmed wife called the doctor. I recognized by his semiconscious state and neurological signs that he had a subdural hematoma, a blood clot under the coverings of the brain. Neurosurgery relieved the clot, but he subsequently died of further intracranial bleeding — a tragic loss of a talented executive, due to a few social drinks!

The authors previously quoted state: "There is a marked difference in the hemodynamic response between control animals and chronically alcohol-treated dogs."

This means that the bleeding time is increased in one who uses alcohol (dose-dependent-relationship).

Briefly I would like to point out another area of significance, in alcohol as a health hazard, the Hematopoietic system (blood building):

1. Alcohol produces a leukopenia (low white count) thus increasing susceptibility to infection.
2. A type of anemia called normochromic (normatytic anemia) can occur.
3. These changes have been noted in the alcoholic with nutritional deficiencies.

These findings were done on bone marrow studies of dogs which were given varying amounts of alcohol to drink. These data suggest that some of the pathophysiological sequels of chronic alcohol ingestion may result from a direct depressive and toxic action of alcohol on the blood-producing system.

Along this same line Dr. M. H. Knisely claims that "excessive alcohol damages the circulating red blood cells, causing them to agglutinate. This slows the blood flow, plugs up the vessels, injures capillary linings and destroys nerve cells through lack of oxygen."¹⁰ Is alcohol a health hazard? To the blood-producing mechanism? Yes!

Anything that injures or threatens to injure the health of a person, or any segment of our population, is a health hazard.

Can we not apply this to the driver behind the wheel of a car?

"Alcohol and gasoline don't mix
Alcohol turns the wheel that wrecks
If you must drink, don't drive;
If you drive, don't drink."

These and many other slogans advise the driver concerning alcohol and its effects on the driver. Yet in the United States of over 50,000 deaths on our highways and three-quarter million injured, better than half are directly or indirectly due to the use of alcohol.

In India 9,000 lost their lives on your highways in 1968. A comparison based on miles driven, deaths per 100 million miles, however, reveals a much higher rate than in other nations, including the United States — 66/100,000,000 miles. What would happen in this country should you completely legalize the sale of alcohol and have a proportionate increase in motor vehicles? Would you not have carnage on the highways on a gigantic scale?

Would you consider something a health hazard if it caused 12 per cent of the absenteeism in industry, a 2 billion dollar loss to U.S. industry alone each year?

This staggering amount does not begin to tell the true story in terms of individual loss and deprivation. When one considers the families im-

poverished, marriages dissolved, homes broken, crimes caused by alcohol and its habitues, it is evident that as Gandhi has said, "Nothing but ruin stares a nation in the face that is prey to the drink habit."

There are yet numerous other hazards for those who use alcohol, especially to those who secure the by-products of the illicit producer, illegally involved in the liquor production. Here are but some of these:

1. Maladies can be caused by chemical ingredients not permitted in the licensed drinks, and by uncontrolled alcohol content of the drinks.
2. Methyl alcohol, or wood alcohol, can produce permanent and irreversible optic atrophy resulting in total blindness.
3. A severe peripheral neuritic causing a permanent paralysis of the lower extremities was caused by a contaminated Jamaica gin in the United States some years ago.
4. Heavy metals are at times found in liquor, and these have produced acute liver atrophy resulting in death.
5. Two years ago in Canada several scores of men were injured seriously and several died before the chemical adulterant was discovered and eliminated from a commercial product.
6. Certain wines from a particular area in Italy have been known to damage certain important structures in the brain.
7. Home brew can also include some harmful ingredients if not properly prepared and handled.

Is this a health hazard? I feel sure we could all agree on these seven points.

Many thoughtful persons have asked the question: Can social drinking be harmful to my health? Most people, or I should say, all those who begin drinking start as social drinkers. One out of approximately 8-10 social drinkers become alcoholic sooner or later. We just can't tell who those individuals are. No chemical or psychological testing has yet been devised that will point out with any degree of certainty just who the potential alcoholic will be.

Doctor Goldberg of the Karolenska Institute in Stockholm, Sweden, an authority in research in alcoholism, made some significant statements about the causes of alcoholics at the last International Congress on Alcoholism in Washington, D.C., September 1968. He said:

(Continued on next page)

1. There is probably a genetic factor present.
2. Stress and traumatic situations play a definite part.
3. Social drinking is commonly the beginning. (I was glad he had the courage to include this.)
4. Persons with a high psychiatric or neurotic index are susceptible.

This eminent scientist also said: "The more we know about alcohol, the more we find early changes in the body organs." Social drinking is certainly the early manifestation in all those who drink and later on become habitual drinkers.

I am a psychiatrist. I see many cases of alcoholism each year. In the United States this tremendous problem is most commonly treated by the psychiatrist, or at least the alcoholic is frequently referred to us after many attempts have failed to keep him (or her) sober and functioning in his or her work.

What do I see when they finally come to my office for treatment? Usually the man has been successful in his trade or profession. He is usually reluctant to come, denies he has a problem. Usually he is under 50 and over 25. He frequently is well educated, is married, and has a family, or did have. He has been drinking since his late teens — usually begins his drinking socially in his senior year of high school or first year of college. Most likely at a dance or some other social function, and usually under social pressures from friends.

He has usually promised to stop drinking after each episode and states that he alone can control it. He does not want any help and does not feel the need of it. Secretly he has a supply that he depends on. He may or may not have had a traffic accident, or trouble with the law. He usually has had many serious domestic problems. This probably has been a major factor in his seeking help from a psychiatrist, even though reluctantly. The family economy is most likely in real jeopardy. His relationship with his wife has been poor for some time, in fact she has threatened to leave him on numerous occasions and has done so, only returning after he has promised never to drink again.

In this typical case he has been alienated from his friends as well as his family. His own self-image has diminished to the point of non-existence. He has lost his good job some time ago and has been accepting lesser jobs for shorter periods of time, quitting or being fired because of his drinking, but always denying this.

From his appearance and quiet manner he could deceive many people, but not his family who have to live with him and know his deceptive ways.

This picture of a typical male alcoholic is drawn to help you to answer the question I have asked before in this paper: Is alcohol a health hazard? A mental hazard to this typical patient? The answer is "Yes!"

As one severe alcoholic put it to me after losing his wife and family, his job and his bank account, his driver's license, and his car: "How can one give up so much for so little!" Yes, alcohol destroys the total person, his personality as well as his physical body. It destroys him socially as well as spiritually.

It can and has destroyed communities as well as nations and governments. Can India afford to permit its own destruction by giving licenses to those who would violate Gandhi's great objective for this developing country? The personal gain, the motivation inherent in a few individuals, can cause the downfall of any good people who do not know the facts about alcohol and its dangers, and its hazards to health. They believe only what they are told by those who have the means to make alcohol seem to be the desire and privilege of all the masses.

How can anyone remain neutral in this undeclared war on the health of a nation! If you and I are to follow Mahatma Gandhi in his self-purification movement, then we must urgently implement our good intentions with a program of *educated voluntary prohibition* — a grass-roots program to counteract those forces that have scores of rupees to promote the sale of their potentially lethal product to a largely innocent and the unsuspecting public of this great nation.

Frontier Gandhi's statement from the *INDIAN EXPRESS* of Madras, dated November 25, 1969, summarizes what I have been talking about in this lecture. Frontier Gandhi said, "It was Gandhiji's dream to see that, after attainment of independence, misery, poverty and liquor vanished. He criticized the rulers for having brought about no change in the lives of the common masses and that excise on liquor even today continued to be a major source of government revenue, as it was during the British days."

REFERENCES

- ¹Mahatma Gandhi centennial number. *Bhavan's Jour* 16:97, 10 May 69
- ²Ibid P. 84
- ³Ibid. P. 85

(Concluded On Page 594)

Editorials

PEER REVIEW

Two important actions having to do with peer review were taken at a recent meeting of the House of Delegates of the Rhode Island Medical Society. The first had short range goals, while the second had primarily long range significance.

The first was directed at attempting to rationalize the relationship among the numerous peer review mechanisms already operative in Rhode Island. Among the more prominent of these are the following:

Hospital Mechanisms

Utilization review committees

Various combinations of audit, medical appraisal, medical records, tissue, mortality, credentials and other committees

District Society Peer Review Committees

Specialty Society Peer Review and Claims Evaluation Committees

State Society Mediation Committee

Blue Shield

Claims Review

Professional Advisory Committee

Medical Advisory Committee

Blue Cross

Utilization Review

Department of Social Welfare claims and utilization review mechanisms

Reviews of various types may be requested by doctors, patients, insurance companies, the State Department of Social Welfare, Blue Shield, and Blue Cross. There has been no standard method for handling problems or inquiries, with resulting confusion and uncertainty over the proper channels which a request for opinion or adjudication should follow.

By resolution, therefore, a special committee was established to be appointed by the President of the Rhode Island Medical Society "to study, in cooperation with other agencies as necessary, the proper place or county and specialty society peer review committees and their relation to other peer review mechanisms, recommend guidelines channels, and points of entry for various types of inquiry or requests for opinion". This committee is now functioning and is expected to make recommendations to the House at its January 1972 session.

The second action was taken pursuant to an initiative of the Providence Medical Association. A special committee of that Association, under the chairmanship of Doctor Joseph E. Caruolo, had been charged with the study of "new developments in the system of the delivery of health care". The committee, in fact, focused its attention on the medical foundation concept. Believing that the foundation principle as applied to Rhode Island should be on a statewide rather than community basis, it undertook its studies in this framework. A draft of possible legislation for a Rhode Island Medical Foundation was prepared by Edwards and Angell, legal counsel for the Rhode Island Medical Society, after considerable background research by counsel. Legal counsel saw wisdom in the State Medical Society applying for a charter of this nature.

The House of Delegates voted to take over from the Providence Medical Association further study and activity in this realm and to pursue it on a statewide basis.

The complexity of the problems involved is of a very high order. The repositories of data alone are multitudinous: hospitals, Commission on Professional and Hospital Activities (CPHA), Blue Cross and Blue Shield, the Hospital Association of Rhode Island, the Rhode Island State Department of Health, the Rhode Island State Department of Welfare, the Social Security Administration, private insurance companies, and undoubtedly others. Coordination and intelligent use of these data are an urgent need in Rhode Island.

We believe that the foundation principle is a rational and practical mechanism for statewide peer review. We do not believe that the situation in Rhode Island lends itself to the use of a foundation for reimbursement. It would certainly fulfill the requirements of Senator Wallace F. Bennett's Professional Standards Review Organization (PSRO).

We believe that the Rhode Island Medical Society should support the foundation principle of peer review and should seek a charter for such an organization at the January 1972 session of the Rhode Island General Assembly.

SHADES OF 1827

This writer is an alumnus of Brown University of many years ago. As he prepared for medical school with courses in organic chemistry, physics, and bacteriology, and, even in that long ago, physical chemistry, he labored in other vineyards as well. He studied Ovid, and Molière, and Goethe in their native tongues and took courses in such solid subjects as European History, Mathematics, and yea Economics (Taussig was very tough going — and very conservative!). He even delved into such ethereal subjects as Music Appreciation, French Civilization, and — mirabile dictu! — Victorian Poetry.

We feel that we have had a solid grounding in and a deep feeling for the humanities. We have an affection for Brown and would not countenance seeing its cultural traditions endangered.

We have a haunting feeling, however, that the profound error of President Francis Wayland is about to be repeated. It has taken almost a century and a half to overcome the damaging effects to the Rhode Island community produced by his sacrifice of a promising experiment in medical education — however admirable his motives may have been.

It is amazing to us that a group of myopic professors, most of whom loudly proclaim their liberal minded concern for the public welfare, would, to protect their parochial interests, stifle the frail rebudding of medical education in Rhode Island as represented by the Program in Biomedical Sciences at Brown University. Thus once again medical education in Rhode Island is endangered.

VACCINATION

The United States Public Health Service has concluded that routine smallpox vaccination in the United States is no longer necessary and recently recommended its discontinuance.

The October 1, 1971, *COMMUNICABLE DISEASE NEWSLETTER* of the division of Epidemiology of the Rhode Island State Department of Health carried the following statement concurring with this view:

"This Division and the Department of Health are in agreement with this change; we have now reached the point in the United States where there is more morbidity and mortality from the complications of smallpox vaccination than from the disease itself."

A paper published elsewhere in this issue of the Journal is interesting in light of this new trend.

INDUCTION OF LABOR WITH PROSTAGLANDIN

A report from England lends support to the view that prostaglandins may, in the future, be a means of conception control. Prostaglandin E₂ was used to induce labor in 40 patients between the 29th and 42nd weeks of gestation. A dilute solution of the substance was administered as a constant intravenous infusion through an arm vein. Uterine contractions were recorded continuously. While amniotomy was not performed at the start of the infusion, membranes were ruptured subsequently in some patients when labor was established.

Vaginal delivery occurred successfully in 37 patients. Twenty-five patients delivered within 12 to 18 hours of the start of the infusion, two within 18 to 24 hours, and two after 24 hours. Three patients required cesarean section. Prostaglandin E₂ produced no maternal cardiovascular or alimentary effects. There were no fetal complications attributed to the prostaglandin.

While this study clearly relates to the successful management of labor with a viable fetus, there is hope that the prostaglandins, originally isolated from seminal fluid, will prove to be a useful abortifacient. There is evidence that the same or related compounds will be effective in inducing abortion early in pregnancy when administered intravenously, or even by vaginal tampon. Prostaglandins may then provide the perfect morning-after "pill".

Although these compounds based on early studies show great promise, some three to five years of further investigation will probably be required before F.D.A. approval can be expected.

REFERENCES

- ¹Beazley JM, Dewhurst CJ, Gillespie A: The induction of labour with prostaglandin E₂. *J Obstet Gynaec Brit Comm* 77:193-9, Mar 70
- ²Edmiston S: A report on the abortion capital of the country, *New York Times Mag* April 11, 1971. Quotation from Edmund Rothschild, M.D.



DERMAQUIZ

Conducted by FRANCESCO RONCHESE, M.D.



At left, the gluteal region of a 90 year old woman, showing the atrophic skin hanging in thin folds
At right, the hanging skin of a 6 months old infant, hanging (hounds-like) because in excess of the body

Answer Next Page



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

MATERNAL MORTALITY IN RHODE ISLAND

(Concluded From Page 583)

demonstrates similar trends for the nonrelated and unclassified causes in the two time periods. The total numbers of deliveries for the two study groups were comparable so that one would expect the number of deaths due to nonrelated causes to be approximately the same. Indeed this was true, there being 12 in the early and 14 in the later series. Although preventability or nonpreventability for nonrelated causes is not considered by the maternal mortality committee, perhaps this policy should be reevaluated. Although pregnancy should have no influence on the disease responsible for causes of nonrelated obstetric deaths, does the very label of pregnancy placed on a woman lead her physician to treat her underlying incidental disease in a more conservative fashion than if she were not pregnant? This attitude is at least suggested by the conservative management of women with evidence of cerebrovascular accidents during pregnancy. There were three subarachnoid hemorrhages in each of the review groups. Perhaps early, aggressive diagnostic and therapeutic procedures might have altered the catastrophic outcome of some of these cases.

Preventability. Possible preventability as well as responsibility for the deaths was determined and assigned as shown in Table 7. Seventy per cent of the deaths were considered preventable in the 1965-1969 study as compared to 59 per cent in the earlier five-year period. The medical component of responsibility is accentuated when one considers that 5 deaths in the earlier group were due to patient responsibility but none in the more recent series.

SUMMARY

In comparing the maternal death rates in Rhode Island for the earlier and later five-year periods it is seen that the maternal mortality rate of 1.95/10,000 LB is not significantly different from the 1.37/10,000 LB of the later period. Hemorrhage deaths decreased significantly and deaths due to sepsis increased significantly. Six of the septic deaths followed cesarean section. Scrutiny of nonrelated obstetric deaths suggests that pregnancy per se may influence the physician's judgment in managing the underlying disease responsible for the patient's demise.

REFERENCES

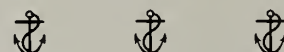
- ¹Webster A: Maternal deaths at the Cook County Hospital. *Am J Obstet Gynecol* 101:244-253, 15 May 1968
- ²Llorens AS, Griner JH, Thompson JD: Maternal mortality at Grady Memorial Hospital. *Am J Obstet Gynecol* 87:386-393, 1 Oct 1963
- ³Davies SD, Beezer JK: Maternal mortality in Rhode Island—a five-year study. *Rhode Island Med J* 48:415-420, Aug 1965
- ⁴Rhode Island Dept. of Health, Division of Vital Statistics: *Vital Statistics* 1968. P. 57
- ⁵Rhode Island Department of Social Welfare and Public Assistance: *Report of public assistance*, 1965
- ⁶Committee of Maternal and Child Care of the Council on Medical Services: *A Guide for Maternal Death Studies*. American Medical Association, Chicago, 1957



DERMAQUIZ ANSWER

(See Page 591)

Left, Senile atrophy of the skin.
Right, Dermatomegaly, also called cutis laxa. At 10 or 15 years of age the infant skin will look like the one of the 90 year old woman.



Ulcer Re- lief!

Dicarbosil®

ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES

319 South Fourth Street, St. Louis, Missouri 63102

HOUSE OF DELEGATES REPORT

(Concluded From Page 569)

EXTRICATION (practical demonstration)

Tuesday, December 21, 1971 at 7 p.m. Lecture #14

HOSPITAL ORIENTATION. (Includes orderly transfer of the patient to the emergency room)

Tuesday, December 28, 1971 at 7 p.m. Lecture #15

EXAMINATION.

* * *

JOINT STATEMENT OF GUIDELINES ON THE FUNCTIONS OF THE REGISTERED PROFESSIONAL NURSE

Nursing shares both the opportunities and the problems of the health care system in the United States. It is to one of the aforementioned problems that this guide is addressed; namely, as legally constituted what nurses may and may not do. As clinical specialization increases in nursing, additional questions will undoubtedly be raised about the authority and judgment of the nurse. While the resolution of these questions will probably be settled in the future through legislation, there are safeguards that must be taken in situations where current nursing practitioners are requested to perform functions previously considered to be within the realm of medicine. In determining changes in the scope of nursing practices, the Rhode Island State Nurses' Association suggests that:

1. Each agency employing registered nurses appoint a standing committee on nursing practice with representation from nursing, medicine and administration to make decisions.
2. Each such committee have access to legal counsel.
3. Any decision made by this committee delegating additional functions to registered nurses be based on a detailed review of the provisions of Chapter 5-37 of the General Laws of 1956, as amended (The Medical Practice Act) and of Chapter 5-34 of the General Laws of 1956 as amended (The Nursing Practice Act).
4. Where a decision is made by this committee that a specific procedure may be safely and legally delegated to a registered nurse, the committee on nursing practice be responsible for:

- a. formulating written policies or guidelines to be used in the administration of the procedure—these to include, among others, the the necessity for written orders from a physician,
- b. establishing an educational program that will insure complete understanding by the nurse of all facets of the procedure including the situations in which the physician should be summoned,
- c. evaluating and updating the written policies periodically.

5. It shall be the duty of the agency to apprise the registered nurses that unless adequately instructed and supervised in the practice of the performance of the procedure, they are prohibited from administering it.

Approved by RHODE ISLAND STATE NURSES' ASSOCIATION BOARD OF DIRECTORS
April 14, 1971

Endorsed by HOSPITAL ASSOCIATION OF RHODE ISLAND June 16, 1971

Approved by RHODE ISLAND MEDICAL SOCIETY



Interested in Tax Free or Tax Sheltered Income ? ?

ASK ABOUT A PROGRAM FOR
YOUR PARTICULAR NEEDS.

TAX FREE BONDS
REAL ESTATE
OIL & GAS DRILLING

WHY PAY MORE TAXES
THAN YOU HAVE TO????

WILKES & CO.

P.O. BOX 766
Warwick, R. I. 02888

463-8110

Member National Association
of Securities Dealers Inc.

ARGUMENTUM AD HOMINEM

Despite the multiplicity of specialty group insurance plans from which you may choose,

Your R. I. M. S. officially sponsored disability income program has withstood the test of time.

Since 1949 . . . no rate increase, benefit reduction, or change in underwriting company due to adverse experience.

SUPPORT YOUR PLAN NOW SO IT CAN SUPPORT YOU LATER

R. A. Derosier Agency

Group Administrator for R. I. Physicians Since 1949
"Treating The Whole Patient" Thru These Affiliates

FOURDEE AGENCY, INC.

(Indiv. Ins. Planning)

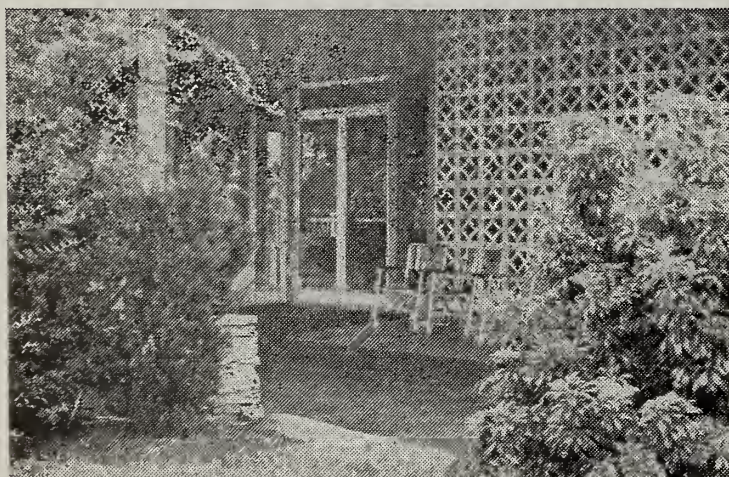
FOURDEE PLANNING CORP.

(NASD Broker-Dealer)

215 Waterman Ave., E. Prov. 02914 438-0660

HEALTH HAVENS NURSING HOME

A Participating Extended Care Facility
In Federal Medicare



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275
JCAH Accredited

ALCOHOL A HEALTH HAZARD

(Concluded From Page 588)

^{4a}Gandhi M: **Collected works**. Publicity Division, Ministry of Information and Broadcasting. 20:119

^{4b}Ibid. 20:400

⁵Ibid. Sacrificing education of children. 25:503

⁶Ibid. Resolution of the Congress. 23:457

⁷Ibid 18:468

⁸Courville CB: **Effects of alcohol on the nervous system of man**. Los Angeles, San Lucas Press, 1955

⁹Knott DH, Beard JD: Newer concepts on the treatment of alcoholism. **Scientific Exhibit**, American Medical Association 115th Annual Meeting, June 26-30, 1966, Chicago, Illinois

¹⁰Knisely MH: CNS and organ damage laid to ethanol-induced sludging. **Recovery** (Ayerst Laboratories) 2 (no. 4):4, 1968



BOOK REVIEWS

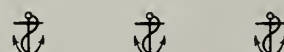
(Concluded From Page 575)

and help protect the innocent as well as aid in the apprehension of the guilty.

The concluding chapters contain information of the type with which all doctors are more or less familiar. Covered are rules for consent for operations or autopsy and a discussion of medical professional liability, with its causes and prevention well documented. Also included are such subjects as the right to practice in the community or in a hospital, the subject of medical testimony, statutes of limitations, and many others.

It is a very convenient handbook to own or consult, particularly the chapters in forensic medicine, a subject unfamiliar to many of us.

FRANCIS B. SARGENT, M.D.



PERIPATETICS

(Concluded From Page 574)

pital. Most is presently Assistant Professor of Medical Science, Brown University.

* * *

EITHNE McCANN, Director of Physical Medicine and Rehabilitation Services at St. Joseph's participated in the "Wheelchair Olympics" in Kingston, Jamaica. Handicapped athletes from around the world competed in athletic activities. Doctor McCann was assisting her husband, CAIRBRE McCANN, Director of the Rehabilitation Medicine at Rhode Island Hospital, in the care of 30 United States athletes competing in the "Olympics". Included among the athletes were paraplegics and quadraplegics.



RHODE ISLAND MEDICAL JOURNAL



